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A STUDY OF THE PERCEPTION OF UNATTRACTIVE TOWNSCAPES

by

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A B S T R A C T

This study examines urban unattractiveness with the aim of developing a better understanding of why some features of the urban melieu are considered more or less unattractive than others. It redirects the focus of research attention from the study of elitist perceptions of highly prized attractive landscapes to the average urban resident's perception of the least attractive face of the everyday urban environment. Initially the investigation tests for a consensus of agreement on what is unattractive in the townscape then measures the effect of locational, social, economic, temporal, environmental and attitudinal variables on the assessment of unattractive townscape views.

A preference test and questionnaire survey are carried out on a randomly selected sample of two hundred and forty working-class residents of Rotherham and Slough. All possible paired combinations of ten photographs depicting unattractive views of the towns are presented; the views were identified as 'unattractive' by local residents in a pilot survey. The resulting preference selections, analysed by Carroll and Chang's MDPREF multidimensional scaling programme, prove conclusively that a consensus of agreement exists among all respondents on the three most and least unattractive views. Respondent's town of residence, sex and age are seen to influence the strength of this consensus. Interpretation of respondents' explanations for preference selections and the stimuli clusters portrayed in the MDPREF configuration diagrams leads to the conclusion that 'economic function' (useful/viable versus useless/derelict dimension), 'condition' and 'style' are important and commonly used criteria in the evaluation of unattractive townscapes. The quality of the urban experience could be significantly improved if a greater effort is made to reduce and avoid replicating those types of unattractive urban features identified by this study.

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A STUDY OF THE PERCEPTION OF UNATTRACTIVE TOWNSCAPES

CHAPTER ONE

Introduction

1. The Study of Urban Perception

Urban perception studies are now a well established and acceptable area of geographical inquiry, but less than a generation has passed since Lynch (1960) triggered the take off of all types of perception studies with 'The Image of the City'. The Lynch study is of particular significance to this investigation, not simply because it was the principal forerunner of perception studies in geography, but because it was the first to consider the perception of the townscape and the first to recognise the importance of imageability in the everyday urban environment. Earlier studies of (Wright 1947 and Kirk 1952) were directed towards the behavioural environment in general not specifically at the urban environment. Lynch's primary concern was to ensure that a city was legible so as to assist movement through it. He saw that imageability increased legibility and focused his attention on maintaining the physical image components, 'identity' and 'structure'. Whilst Lynch acknowledged that imageability increased the depth and intensity of human experience, making life in the more vivid setting of an imageable city more meaningful, he paid scant regard to the non-physical image component, 'meaning'. This oversight became Lowenthal's research focus (1961). He advocated that perception was dictated more by culture, personality, experience and learning than by form and structure.

This investigation uses a combination of the Lynch and Lowenthal view points. It considers the physical image components (condition, style, colour etc) used in the aesthetic assessment of townscapes and the non-physical components which influence observer judgements, such as social, economic, environmental and temporal assessor variables.

1.1 The Urban Malaise

The increasing concern over the lack of aesthetic quality in the urban environment and consequential decline of perceptual stimulation and satisfaction, has been closely linked to perception studies. Research has expanded the definition of 'perceptual satisfaction' from relating to only the purely visual aesthetic attributes of the urban environment, such as form (Cullen 1961), rhythm (Sharpe 1967) and physical complexity (Rapoport and Hawkes 1970), to a more phenomenological definition, synonymous with urban 'meaning'. The revised definition encompasses cultural (Lowenthal 1962, Harison & Howard, 1972), social (Rozelle & Baxter 1972), temporal (Smith 1974(i) & Morris 1978) and symbolic (Tuan 1974) human values as well as the tangible physical qualities of the townscape. It has become increasingly clear that the visual experience alone is insufficient to produce a 'sense of place', a deeply felt human involvement with places by those who live in, or experience them (Relph 1976). Also if the wherewithal enabling man to attach meaning and involvement to place is impeded by insensitive, or thoughtless redevelopment, a depth and intensity of feeling cannot develop and a 'sense of placelessness' will prevail (Relph, 1976).

Sentiments such as "the town has no character", "its not like it used to be" and "it's much like any other town", have been felt, if not expressed by many people about many of today's towns. They voice a common awareness of the gradual loss of atmosphere, feeling and individuality from our urban environment. The speed, scale and nature of recent urban changes are all responsible. Their combined effects have repulsed the natural process of adaptation, causing a rejection rather than an acceptance of the new townscapes. In times when change was less rapid, geographically more confined and adhered to more traditional building styles and materials, man could assimilate and adapt to the alterations and new developments at his own pace, this helped make his new townscapes gradually more acceptable, satisfying and even meaningful.

Urban dwellers risk losing their aesthetic awareness as a consequence of placelessness. Smith (1974(ii)) postulates that the urban environment has the capacity to meet man's psychological needs, both intellectual and emotional. He contributes the destruction of historic buildings to the reduction of symbolism, coherence and meaning in the townscape and the failure of modern replacements to recoup this loss; the new arrivals offer only a monotony of form and texture and a lack of uniqueness. He sees aesthetic awareness as the result of a neurological balance between novelty and surprise, stability and order, and that the components essential for maintaining this balance, can never be supplied from an adulterated urban environment devoid of perceptual stimulation. Smith warns that if the quality of the urban experience continues to decline, man will suffer a perceptual deprivation which will upset the neurological balance responsible for producing aesthetic response. Man's aesthetic awareness will thereby diminish.

The habitualisation of the urban 'uglification' process (Gutheim 1963) is another consequence of placelessness. Urban residents' constant exposure to undesirable ugly environmental stimuli causes them to grow accustomed to and adapt to uglification. They lose aesthetic awareness and 'become aesthetic cripples permanently handicapped in the use of their senses, brutalised victims of urban anarchy'. (Gutheim 1963).

Habitual adaptation need not necessarily remain a negative phenomenon (Smith 1977). When the environment offers sufficient raw material to satisfy the emotional appetite, habitual adaptation can produce a greater attachment to places. Yet all too often, such material is unavailable in the built environment so that habitual adaptation remains an undesirable consequence of placelessness.

Selective vision (Relph 1976) is induced by placelessness. Areas of the urban environment too ugly, or too monotonous to look at, are blanked-out by the observer. The complaint is widespread, 'few people look at the places they live in, work or travel through.... they are anesthetised against their surroundings to avoid pain', (Lowenthal 1962). As a result, sometimes large areas of the environment become non-existent in perceptual terms. This puts unreasonable demands and expectations on the perceived urban areas. In order for the urban entity to produce a perceptually satisfying and meaningful experience, the perceived areas would have to provide extremely potent perceptual stimulation to compensate for those parts blanked-out by selective vision.

The problems created by the declining quality of the urban experience must be confronted. A decision is needed on the best means of releasing our towns and cities from the tightening grip of placelessness, to make them more meaningful and satisfying places to live and work, to prevent selective vision and the loss of aesthetic awareness.

1.2 The Range of Treatment

We are faced with three alternative means of improving urban quality. First to do nothing and assume that the urban malaise will improve of it s own accord. Second to make more effective use of aesthetic controls in environmental planning, or third to learn more about the 'blanked-out', unattractive areas and where possible to improve them or avoid their replication.

It would be easy though over-optimistic, to do nothing and hope the decline of urban quality is a temporary transitionary phase leading to a more meaningful urban experience. Such an approach presents no problems of implementation and the present day landscape is seen to be comfortable and quite efficient despite it s lack of depth, variety and intensity of feeling (Relph 1976, p.133). Yet this option incorporates the naive assumption that the urban environment has the capacity to right itself without direct intervention by man, or indeed by a change of attitude towards more sensitive urban development. It overlooks the possibility that life in towns and cities might become a completely intolerable experience before the onset of the more desirable and satisfying phase of urban existence.

It would be very tempting to adopt the second alternative and make more effective use of aesthetic controls in development planning. It would necessitate no new legislation since the legislative machinery already exists in the Town & Country Planning Act 1971, but it would require Government to support the use of planning controls for improving environmental quality. At present, it is unlikely that such support would be forthcoming. The DOE circular 22/80 reflects a negative view of the results of aesthetic control, advising local planning authorities to withdraw from the whole area of design control except "if the sensitive character of the area or particular building justifies it". However, Government policy is not irrevocable so the reaffirmation of aesthetic control should not be viewed as a completely lost cause, it remains a feasible alternative.

Before making a commitment to this approach as the one most likely to improve urban quality, it would be prudent to review the past record of aesthetic controls in urban development planning.

Prior to the Second World War, the initial steps taken towards protecting townscape aesthetics were promising. By 1930 a number of city councils had taken private legislative action to control the number, height, spacing and character of new buildings in their historically sensitive areas. In addition, the Town and Country Planning Act (1932) had incorporated measures to protect ancient and architecturally interesting buildings, trees and woodlands, and advertising and this was followed by controls on urban sprawl in the Ribbon Act (1935) and Green Belt Act (1938). However the devastation caused by the Second World War, the increasing urban population and motor car usage, diverted planning attention away from urban aesthetics and towards redevelopment schemes and those reducing traffic congestion. Statutory measures were made for landscape protection in the National Parks and Access to Countryside Act (1949) and the Designation of Special Landscape Areas (1950), but the Town and Country Planning Act (1947) which gave planners greater control over developments than ever before, provided no guidelines on urban development aesthetics. Consequently, urban designers enjoyed relative freedom from aesthetic control and brought about widespread, large scale redevelopment schemes in the new modern vein.

During the 1960's increasing concern over the loss of historically and architecturally significant buildings to such redevelopment schemes, propagating the already unpopular Modern Movement in architecture, produced the rise and massive following of the Conservation Movement. The movement united public and academic feelings and generated increasing public awareness to the problem of diminishing environmental quality. This prompted planners to consider urban quality as a separate issue, (Hazan 1978). The Planning Advisory Group (1965) recommended that better defined development guidelines (aesthetic controls) would improve urban quality. The subsequent Town & Planning Act (1968) took heed of these recommendations and called for all new development plans to incorporate measures for improving the physical environment.

The combined effect of the Town and Country Planning Acts 1968, 1971 and the legislation pertaining to the protection of historically and architecturally significant buildings and the urban landscape (Civic Amenities Act, 1967, Historic Buildings and Ancient Monuments Act 1953) did not arrest the decline of urban quality. A number of factors contributed to this failure; the design profession's negative reaction to aesthetic controls; the limited extent of control application; and more important, the problem of interpreting and defining environmental aesthetics and the lack of expertise among planning officers.

The design profession's opposition impeded the effectiveness of aesthetic controls. Until the implementation of development legislation (1968), architects had enjoyed design freedom and by tradition, held the responsibility for creating and maintaining aesthetic quality in the built environment. A fierce rivalry for aesthetic responsibility, between the design and planning professions ensued. Architects, sceptical of planners' aesthetic judgement, disputed the merits of control claiming it strangled creativity and originality (Punter 1981). Planners retorted with criticisms of the designer's failure to produce quality developments during the control-free period preceding legislation.

Any system which employs aesthetic controls has to make distinctions and judgements on the basis of aesthetic quality. Another serious failing of this approach, has been the imposition of professional tastes on public landscape users (Penning-Rowsell 1973). Planners and architects may well hold professionally opposed standpoints regarding who should control environmental aesthetics, but they share the biased assumption that a 'qualified professional' is the best judge of aesthetic matters (Penny 1980). It is considered that 'the professional both knows what the public wants and more important, what is good for the public' (Porteous 1971), even when professional taste is 'at variance with the attitudes of the general public' (Penning-Rowsell 1973).

Landscape and Townscape legislation, including aesthetic controls, has not improved environmental quality because it has been extremely limited in application. Emphasis has been placed on the identification protection and conservation of highly prized areas in which few of us have the good fortune to live, or work (Areas of Outstanding Natural Beauty (1950), National Parks (1949), and listed buildings and urban conservation areas). Planning legislation has paid no attention to the improvement of the more common place, poorer quality (though no less-valued) 'everyday' environment in which the majority of us perform our daily activities. The everyday environment is far more likely to be of greater personal significance to the common man than any nationally prized scenic resource. It is his birthplace, his home and the backcloth to his meaningful life experiences; it is significant because it represents the uncontrived expression of people's activities and wants (Relph 1976).

It is not my intention to undermine the value of the conservation ethic. When confronted with the prospect of a diminishing landscape resource and the widely accepted consensus that some landscapes of exceptional merit must be conserved for the benefit of future generations (Newby 1978), conservation legislation is a practical and sensible proposition. However the focus of attention on only the attractive and conservation of only noteworthy features and areas will not improve environmental quality, it will only create oases of distinction amid a desert of bland mediocrity and deformity. Society should also pay attention to the effects of function, culture and time on popular environmental tastes. Features considered worthy of conservation today might not be viewed as such by future generations: today's criterion for scenic beauty is not necessarily that of tomorrow (Lowenthal 1962).

Another failing of aesthetic control is the lack of an objective reliable and standard means of evaluating aesthetic quality. From 1967 to 1977, geographers developed a broad spectrum of techniques for use in landscape quality assessment. Early field-based 'intuitive' methods (Penning-Rowsell 1981) classified landscape according to intuitive professional judgement (Linton 1968, Tandy 1971) Later techniques using landscape surrogates, assessed individual landscape components then extrapolated and predicted aesthetic quality for areas not directly assessed by observer-assessor panels (Coventry-Solihull-Warwickshire Sub Regional Planning Study Group 1971 and Robinson et al 1976). The most recent technique used semantic differential scales to measure public attitudes to perceived attractiveness (Penning-Rowsell et al, 1977). The different methods have been reviewed in detail by others (Dearden 1980, Penning-Rowsell 1981) suffice to say that they fell far short of their intended goals. They were never free from subjectivity either in the operator assessment stage or the design of the landscape components and measurement scales. Some methods encountered considerable technical difficulty in their application and or analysis others were very complicated, time consuming, labour intensive and generally better suited to regional, stategic planning rather than local application. More significantly all lacked theoretical substantiation, 'when considering the practicalities of landscape evaluation, it is this last problem which emerges as crucial' (Appleton 1975ii).

The absence of a theory explaining why some landscapes are preferred to others is not a failing of aesthetic controls and landscape evaluation techniques, but is the stumbling block for all work concerned with environmental aesthetics. Although several explanations for man's aesthetic response to the environment have been proposed, none offer any practical means of application.

The habitat theory (Appleton 1975ii) is a biological explanation. It interprets the satisfaction obtained from the contemplation of landscape as a spontaneous reaction to the environment as a habitat; that is a place which provides the means of achieving our simple biological needs. Animals and primaeval man interpreted the environment in terms of it s potential for providing a strategic habitat; one which offers the advantage of prospect and the security of refuge. In today's civilised society and relatively controlled environment, man's concern for his survival is no longer paramount, but the mechanisms by which he spontaneously appraises the environment are not lost they are passed on from one generation to another. They enable man to

> "enjoy the satisfaction which results from the perception of a biologically favourable environment without exposing ourselves to the hazards against which this sensitivity to our surroundings would protect us in a 'state of nature'", Appleton 1975 p.70.

Appleton postulates that the environmental aspects of prospect and refuge then take on symbolic values. In doing so, any variations in their spatial arrangement, or the means by which they communicate with the observer, will produce different levels of aesthetic satisfaction.

Smith (1974i) advocates that the aesthetic response is neurological, a subconscious reaction aimed at producing a state of homeostatic equilibrium; a subliminal psychological desire for harmony and balance, order and stability in the physical environment. Punter (1982) equates the response with an expanded philosophy of Dialectic Materialism this is a phenomenological approach which does not abstract the aesthetic experience from the real life experience of the environment. It postulates that environmental aesthetic satisfaction varies according to an individual's moral and social ideology and his reaction to the social realities of the landscape. Each of these theories proposes quite different interpretations of environmental aesthetics but none offer any practical means of measuring the biological, neurological or materialist response. Therefore they are interesting perspectives but as they stand, cannot be employed to support or direct, an approach aimed at improving the aesthetic quality of the environment.

When confronted with the problem of declining urban quality, to do nothing but hope the situation is a transitional phase leading to a more meaningful urban existence, is myopic and unacceptable. To rely entirely on the imposition of aesthetic control over new developments in order to improve urban quality, has been shown to be unsuccessful and unrealistic given: the limited scope of application, to only attractive or historically or architecturally valued features; the lack of an objective and efficient quality evaluation technique; and the absence of a theoretical basis on urban aesthetics.

This study has adopted an alternative approach towards improving urban quality it considers the unattractive aspects of the everyday environment we either blank-out or just accept. At a practical level this approach has greater scope, it does not confine attention only to features and areas currently considered attractive and significant, but expands the field of inquiry to identify those physical features and areas commonly considered unattractive. Such features could be improved, or if this is not possible, could be used as examples, to draw attention to those types of unattractive urban aspects we should avoid replicating elsewhere. At a philosophical level, the approach takes us some way towards a better understanding of environmental aesthetics. It should provide greater insight on what makes some features more or less unattractive, attractive and preferable to others in the urban environment.

In a theoretical vacuum (Appleton 1975 ii), an empirical investigation of the perception of unattractive townscapes and the effects of regional, socio-economic, environmental, temporal and attitudinal variables on ordinary peoples aesthetic judgements, is a sensible and realistic alternative course for improving urban quality. For, as Lowenthal (1967) has argued 'without understanding the bases of perception and behaviour, environmental planning and improvement will be doomed to failure'.

1.3 An Investigation of the Perception of Unattractive Townscapes

The first objective of this investigation is to examine what the typical urban resident (the non-professional the layman) considers to be unattractive about his or her everyday urban environment; to ascertain if features of the urban milieu are considered to be more or less unattractive than others.

It is widely accepted that a general consensus of agreement exists on what is deemed to be environmentally very attractive. On the basis of this assumption Areas of Outstanding Natural Beauty and significant architectural features of the built environment are designated and protected by law for the benefit of future generations. For most of us these features are part of the 'Sunday Environment', visited from time to time but not experienced on a day to day basis. This inquiry aims to prove the existence of a consensus at the negative extreme of the aesthetic scale. It will focus attention on those aspects which are most damaging to urban quality. If the features it highlights cannot be improved, preventative measures should be taken to avoid their replication. It is not the intention of this study to propose those means, except to recommend that an investigation of preventative measures should be considered after this study, to constitute the next step for improving urban aesthetic quality.

The second objective of the study is to help develop a better understanding of why some features are considered to be more or less unattractive than others. It explores the perceptual dimensions underlying the assessment of unattractiveness and tests the following hypotheses:

(i) social and socio-economic variables, sex, age and socio-economic status influence an individual's assessment of unattractiveness via the medium of functional vision;

(ii) temporal variables, age and length of residence affect an individual's adaptation to declining environmental quality;

(iii) aesthetic awareness is proportional to an individual's level of environmental experience, and;

(iv) attitudes towards the appearance of towns, residential satisfaction and the affinity with one's birth place influence an individual's aesthetic judgement of local scenes.

Lowenthal (1962) defines functional vision as the process by which an ugly, monotonous and unacceptable environment becomesacceptable to the individual, because it satisfies a particular function(s) he requires. I submit that functional vision is not fixed. As an individual's life style alters, so too will his needs and functional vision. For instance, when a person reaches retirement age, or when his socio-economic status increases, his life style will change along with the needs and functions he places on the environment. With increased leisure time, the retired are more likely to prefer residential areas within easy access of rural or recreational facilities, and the increasing purchasing power of the socially upward-mobile is more likely to reflect in preference for residential areas that are best in keeping with their rising status. Both groups are therefore less likely to dismiss industrial uglification and urban sprawl as an acceptable cost of employment or shelter. They are more likely to judge harshly those unattractive urban features which threaten the function of their immediate environments; unlike the younger and socially immobile groups, who would readily forsake the quality of their surroundings for the prospect of work and accommodation.

I propose that temporal variables of age and length of residence influence aesthetic judgement because they directly affect an observer's environmental adaptation. Residents who have spent a considerable period of time in an environment of deteriorating quality and massive transformation, gradually adapt to the declining environmental standards and in doing so, begin to expect less from townscape alterations; they become resigned to the inevitable and deleterious process of urban uglification.

It is my hypothesis that the level of an individual's environmental experience is proportional to his aesthetic awareness. Environmental experience is necessary for positioning the base level of aesthetic judgement. When an observer has experienced only one type of environment, he cannot objectively assess the quality of that environment because he is unable to compare it with a memory store of more or less attractive experiences; he has no such memory store. Such an extreme case is unlikely, one would expect most people to have acquired some degree of environmental experience if only from secondary sources such as television. However an individual possessing only low level experience, of a low quality environment will be less discerning about attractive and unattractive environmental features than an individual with a higher and more varied level of environmental experience. I submit that a lack of experience therefore impairs aesthetic awareness.

It is proposed that attitudes towards the appearance of towns and residential satisfaction and affinity with one's birthplace influence the aesthetic assessment of local scenes. Residents dissatisfied with the appearance of their town and as a place to live, are likely to judge unattractive local scenes more harshly than unknown, non-local unattractive scenes, not necessarily because of the superior aesthetic quality of the latter but because the scenes are not local. The opposite bias is more likely to occur among indigenous residents than non-indigenous residents. Respondents who have an affinity with their birthplace, will assess unattractive local views more sympathetically than unknown, non-local scenes, not because the local scenes are superior in aesthetic quality but simply because they are 'home-views'. (Tuan 1974).

In order to develop a better understanding of the perceptual dimensions underlying the assessment of urban unattractiveness, I propose to analyse:

(i) observers' verbal explanations of aesthetic judgements and;

(ii) the physical nature of any scenes considered to display similar levels of unattractiveness.

Such analysis should provide greater insight on why some urban features are considered to be more or less unattractive than others.

Finally I propose to test the assessment of urban unattractiveness in more than one location. This will serve two functions. First, the replication will validate the findings of the initial survey, freeing them from criticism on the grounds that the results are peculiar to the environmental circumstances at one specific location, and will give the study conclusions and recommendations of national rather than local significance. Second, a replication will provide opportunities for identifying regional variations in the assessment of urban unattractiveness.

CHAPTER TWO

Methodology

2. Introduction

In this chapter the methods used to obtain the information needed to satisfy the research objectives are described. It considers the range of methodological options available and explains the decision to use a preference test and questionnaire survey, followed by a multidimensional scaling analysis.

Rotherham and Slough survey sites were selected and the sampling frame and questionnaire were tested in a pilot survey which identified unattractive townscape views. The views most frequently listed by the pilot sample were photographed and presented in pairs, for preference assessment in the main surveys. Explanations for preference selections were sought from the lower socio-economic respondent sample and information about the respondents and their attitudes towards their local townscape, was obtained from the questionnaire.

2.1 Methodological Options

The objectives of this project are threefold. First to establish whether a consensus of agreement exists among respondents' preference ratings of a set of photographs of unattractive townscapes. Second to explore the effect of certain variables or respondent characteristics on preference assessments and third, to investigate the perceptual dimensions underlying preference judgements of unattractive townscapes, to develop a better understanding of why some scenes are considered to be more or less unattractive than others. In order to obtain the information to meet these objectives, respondents were asked to complete a preference test and questionnaire interview.

A number of different techniques may be employed to elicit respondent preferences for particular stimuli: preference rankings, ratings, paired preference comparisons, or a combination of these methods. In this study, preferences were selected from pairs of unattractive townscape photographs, and respondents were asked to explain their preference choices.

Preference ranking techniques such as those used by Garling (1976) were considered unsuitable for this study. A set of ten photographs depicting quite varied scenes would prove too difficult and confusing to rank simultaneously. It was considered likely that a respondent would dismiss some preference assessment criteria, simply in order to produce the ranked preference order requested by the researcher. A respondent would find it much easier to assess only two photographs at a time. From an operational view point, explanations for paired comparison preferences would be easier to record than those of preference rankings. Some researchers have used tape recorders to record explanations for ranked preference solutions (Garling, 1976) but on the whole, such techniques are disfavoured as they might distort or inhibit responses particularly with lower socio-economic groups. By using a paired preference comparison technique, also the researcher could guarantee that each townscape was directly compared and assessed with every other townscape in the display set.

The single most popular method of eliciting preferences by ratings is the semantic differential technique. It has been frequently applied by geographers to study different aspects of environmental perception. Golant and Burton (1969) used the device in the perception of natural hazards; Burgess (1978) in the study of place imagery; and Morris (1978) in the perception of old and new buildings. In spite of such a long established tradition of geographical use, the technique's relative ease of application and suitability to factor or principal components analysis, it was not used to assess preferences for unattractive town-scapes, for reasons which will be explained after a brief description of the semantic differential technique.

The semantic differential was developed by Osgood et al (1957) to measure dimensions of meaning. The psychometric technique consists of a set of antonymous (or bipolar) adjectives separated by usually seven equal scale intervals, for example 'cold - - - - - - - hot'

An odd number of scale intervals provides a neutral point for use when a respondent considers neither adjective appropriate to the stimulus rated.

A respondent is required to indicate the applicability of each scale to the stimulus displayed, by ticking the most appropriate scale interval. Each scale interval is accorded a particular value so that scale values may be summed and profiles compared at an individual or aggregate level. Results may be factor analysed to produce the underlying dimensions of meaning. Early studies by Osgood (1957) and Heisse (1969) identified three common dimensions in studies using the semantic differential technique, namely, evaluation, potency and activity. They found that evaluative scales such as 'good - bad', 'beautiful - ugly' accounted for the majority (50%-75%) of the data variance, and potency and activity scales (such as 'hard - soft', 'active - passive') accounted for only half the variance of the evaluative scales.

The principal reason for not choosing to use the semantic differential was that it required the researcher to pre-select the rating scales used by the respondents. Pre-selection casts a number of doubts on the representativeness and impartiality of the scales. First, the respondent is not at liberty to supply his own assessment criteria, but obliged to use those provided by the researcher which may be of little value to the respondent. Second, the success of the technique and the validity of the results rely heavily on the researcher's ability to provide a complete range of scales which the respondents judge applicable to the stimulus. The researcher therefore requires a considerable degree of insight about the sample's likely assessment criteria. Clearly the number of different types of scales incorporated into the semantic differential will influence the perceptual dimensions underlying the stimuli ratings. The technique assumes the scales are interpreted in exactly the same way by the researcher and respondent. However the meaning of certain scales is not always easy to interpret; it can vary from one stimulus to another, or be affected by the association of other scales. For instance, Burgess (1978) acknowledged that the principal component 'environmental - evaluation' in her semantic differential test of place imagery, was partly attributed to the stimulus-scale interaction and the disproportionate number of evaluative scales incorporated in the test.

Personal Construct Theory uses the repertory grid technique and was considered as an alternative methodological option to investigate the perceptual dimensions of preference judgements for unattractive townscapes. The technique avoids the use of predetermined preference assessment criteria like those used in the semantic differential, but operational and data processing problems inherent in the method made it unsuitable for use.

The Personal Construct Theory and repertory grid technique were developed by Kelly (1955) for use in psychology. It is based on the assumption that man arranges the features of the perceived environment according to their attributes. Those attributes may be measured on a scale of meaning produced by each individual on the basis of experience. The scales are bi-polar and perceived environmental stimuli (or elements) can be rated on those scales, known as personal constructs. In the repertory grid test, respondents are presented with triads of stimuli, supplied by a researcher and produced by a respondent in an earlier test. Respondents are required to distinguish one stimulus from the other two stimuli members of the triad. The reason supplied for the distinction is recorded as a personal construct. This process of construct elicitation continues until the respondent is unable to produce any new constructs, or until all the triad combinations of the stimuli set are exhausted. Each construct is then rated in terms of it s applicability to each of the stimuli displayed, to produce a repertory grid matrix of the results.

Harrison and Sarre (1971) adapted the clinical psychology technique for use in studies of environmental perception, but encountered serious operational and data processing problems. The length of time required to complete a repertory grid test imposes severe limitations on the respondent sample type and number. Harrison and Sarre used a respondent sample of twenty middle class housewives in their study of the perception of Bath, and Hudson (1974) based his work on the images of the Bristol retail environment on only twenty-six first year student migrants. As one aspect of this investigation was to explore the effect of the locational variable (town of residence) on the assessment of unattractive townscapes by preference selections of residents from two different towns, a technique such as the repertory grid, which restricts sample size was considered in appropriate. If employed, it would have confined the investigation to an unrepresentative sample size. It was also considered unlikely that the lower socio-economic sample approached would have neither the time or inclination to complete a very time-consuming repertory grid test.

Any technique which avoids using a predetermined standardised response format is likely to produce a great variety of responses, the repertory grid method is no exception. The problems encountered by Harrison and Sarre (1975) in the repertory grid analysis stages of the Bath study were caused by the very large number (334) of different personal constructs supplied by the small respondent sample. The value of comparing individual subject's repertory grids was negligible, as only nine personal constructs were common to each member of the sample. Aggregate level analysis presented even greater problems, as the principal components analysis performed satisfactorily on individual subjects' repertory grids, could not reduce a correlation matrix as large as the aggregate 'super grid'. In view of the limited comparability of repertory grid data matrices and the difficulties of reducing the vast volume of aggregate data, the repertory grid technique was considered to be an unsuitable methodological option for the study of unattractive townscape preference-perception.

Adjective checklists were considered unsuitable for generating the type of data required to meet the study objectives. Checklists are frequently used as an index of public or personal opinion. The technique consists of lists of adjectives which are presented to respondents who are asked to underline the descriptions they consider are most appropriate to the stimulus displayed, or the issue in question. Like the semantic differential, the main drawback of using checklists is that they require a great deal of insight and care on the part of the researcher, to produce balanced, unbiased and representative lists of adjectives which accurately reflect the range of opinion canvassed.

The thematic apperception test is essentially a clinical psychology technique but has been adapted by social scientists, to measure attitudes towards a variety of social issues (Oppenheim, 1966). The technique has been rarely used by geographers in the study of environmental perception and was considered unsuitable for use in this particular study. Respondents are shown pictures related to the research problem under investigation and asked to describe and interpret them in the form of a story. Analysis of the stories should reveal information on the sample's attitudes towards the stimuli displayed. The technique is best applied in laboratory-type conditions, it is time consuming and requires a considerable level of psychological training to interpret the story information; it was therefore considered impractical for use in this research problem.

It has been shown that a variety of methodological options were open to the researcher in the preference-perception study of unattractive townscapes. Preference ranking, semantic differential, repertory grid, checklists and thematic apperception techniques were all possible methodological options, but in view of the particular drawbacks of these techniques, a simple paired preference comparison test and multi-dimensional scaling analysis, was chosen as the most practical and efficient means of eliciting, and processing preference judgements of unattractive townscapes.

MDS is a collective term which incorporates a large number of data analysis techniques used in social and behavioural sciences. In brief, MDS identifies the hidden structure from a matrix of survey data and presents the solution in the form of a geometric configuration. Such a display format is easier to read and interpret than the columns of factor or component loadings produced by the data reducing techniques, factor analysis and principal components analysis.

The objects, or stimuli under study appear as points on the MDS configuration solution. The interrelationship of the stimuli is represented by the spatial distances between the points in the configuration. The prime objective of MDS is to produce a solution that accommodates the greatest proportion of the data, by using the least number of pre-selected dimensions.

The MDS technique developed in two distinct phases. It was originally designed for use in psychology and most of the early work was performed at Princetown University (New Jersey) by Torgerson (1958), Messick and Abelson (1956). In 1952, Torgerson produced the first workable MDS model but it s application was limited to quantitative metric data and lacked a measure of 'goodness of fit' with the original data set. The second development phase was characterised by the introduction of a non-metric MDS approach. A model was designed to produce a constrained metric representation from qualitative (ordinal) non-metric data (Shepard, 1972 and Kruskal, 1978).
Based on the analysis of proximities, the earliest model used similarity - dissimilarity data (Shepard, 1962 and Kruskal, 1964) but was later adapted for use with preference data by Carroll and Chang (1964). The Multi-Dimensional PREFerence analysis technique, MDPREF, uses preference score matrices produced by preference ratings and rankings or derived from paired preference comparison dominance data.

The main reason for using MDS in this study was to measure the level of preference consensus or dissensus (disagreement) between different groups of respondents, and to investigate the effects of certain variables, or respondent characteristics, on preference judgements of unattractive townscapes. MDPREF was particularly well suited to these objectives. Preference data from the different respondent groups was subjected to separate MDPREF analyses and the configuration solutions compared to assess the differences between the groups' overall range of subject vectors, level of preference consensus, order and groupings of the stimuli point projections along the average subject vectors. To determine the effect of the particular variable under investigation, preference variation patterns were sought across the various respondent groups who shared the same variable characteristics. MDPREF is described in greater detail in Chapter Three (3.2)

Another reason for using MDPREF to analyse the preference data was to identify the perceptual dimensions underlying the respondents preference judgements. Carroll(1972, p.128) warns the user against relying on this function of the MDPREF programme,

> 'it would be overoptimistic to suppose that this 'vector-model' analysis always unearths the underlying perceptual dimensions'.

He does however acknowledge that researchers (e.g. McDermott, 1969 and Shepard and Sheenan (see Carroll, 1972), have successfully employed the technique for such purposes. Carroll's criticism is directed at those methods of interpreting MDPREF solutions which define the configuration axes, and are often produced only after the axes have been rotated to better-fit the stimuli point arrangement. He fails to consider the alternative means of identifying perceptual dimensions, by using point clusters or patterns in the MDPREF solution stimuli arrangement. For example Coxon (1974)identified the perceptual dimensions of Bollen-Delbeke's family composition data by using a radex(1) to interpret the MDPREF configuration arrangement of stimuli points. In this study of unattractive townscape preferences, attention was focused on the identification and interpretation of stimuli point clusters in the MDPREF configuration solutions. To reduce the subjectivity of this means of interpretation, respondents were asked to supply reasons for their townscape preferences. Unlike Harrison's and Sarre's application of the free-response repertory grid technique, the free-response preference explanation method did not generate an unmanageable amount of information. It also avoided incorporating predetermined meaning scales like those of the semantic differential technique.

The introduction of a non-metric application of MDS, greatly increased it s versatility to reach beyond the confines of

1. A 'radex' is a graphical structure observed in scaling solutions consisting of two or more concentric circles with lines emanating from the centre, dividing the circles into sectors.

psychology. It has been used in market research (Green & Carmone, 1972), political science (Weisberg, 1972) and Sociology (Coxon & Jones, 1977). In geography, a variety of MDS models have been employed in three quite specific aspects of perception research. It has been used to investigate consumers' perception of the retail environment (Rushton, 1971; and Spencer, 1978 and 1980); to examine the effects of regional and city preferences on migration behaviour (Schwind, 1971; Ewing, 1976; and Lueck 1976); and to explore the effects of perceptual distance distortion on urban mobility (Golledge et al 1969, and 1976).

The application of MDS in the preference-perception study of unattractive townscapes is significant in two respects. First, MDS has never before been used to explore lower socio-economic classes' reaction to the unattractive aspects of the urban environment. Second, this research application of the technique breaks with the tradition of almost exclusive use by American researchers.

A questionnaire was designed for use after the preference test. The information it generated was used to categorise preference data according to groups of respondents who shared particular characteristics. Each groups' preferences were subsequently analysed by MDPREF scaling. The questionnaire employed in the main survey is displayed at Appendix II Section One determines whether the respondent is indigen ous to the survey site and if not, his/her length of residence. Section Two considers the respondent's local and non-local environmental experience, visiting patterns, frequency, mode of transport and purpose. Section Three examines the respondent's satisfaction with living in the survey town and attitudes towards the appearance of the townscape. The final questionnaire Section provides socio-economic information such as age, sex and employment status.

2.2 The Survey Sites and Sampling Frame

"Come, friendly bombs, and fall on Slough!
It isn't fit for humans now,
There isn't grass to graze a cow
Swarm over, Death!"

"Slough" by Sir John Betjeman (1937)

Time and budget limitations made it necessary to restrict the regional comparative study to two towns. The towns selected as survey sites had to be distinct geographical entities which were perceived as urban units and with which respondents could associate themselves as residents. Administratively defined inner and outer city districts were therefore considered unsuitable survey sites. Rotherham and Slough were duly selected as survey sites. Both towns are well defined urban entities and not simply continuations of the larger neighbouring city conurbations of Sheffield and London. They also possess some interesting historical and demographic differences which could be explored in the preference-perception study.

Rotherham is located approximately seven miles east of Sheffield and has a population of 250,000 (1981 Census Report). Historically it is a steel manufacturing and coal mining centre, but in more recent years has suffered greatly from the decline of the steel markets and general economic recession, resulting in the closure of several large steel plants and associated industrial concerns. Large areas of rubble and derelict industrial buildings occupy the oldest industrial site at Parkgate, while most of the recently established industry is found on the Eastwood Trading Estate and includes light engineering, clothing, food and drink manufacturing (see Figure 2.2.1). There is a small foreign immigrant population, mostly Asian families in the St Ann's Road area.

The historical development and demographic structure of Slough varies quite considerably from Rotherham. Slough is situated approximately twenty miles west of London, with a population of 99,000 (1981 Census). At the turn of the century, Slough was little more than a service centre meeting the needs of the surrounding rural area. Unlike Rotherham, industrial development in Slough was very much a twentieth century phenomenon. During the inter-war years the town experienced a tremendous industrial expansion which attracted migrants from north-east England, Wales, Northern Ireland and Eire and the local rural hinterland. It's industrial 'take-off' and population expansion irreversibly transformed Slough almost overnight and prompted Sir John Betjeman (1937) to write so very disparagingly of it. London's decentralisation policies during the post war years further increased Slough's non-indigenous population, and the close proximity of Heathrow Airport and the well established Asian communities in Southall and Hounslow attracted a large number of Asian immigrants to Slough. Many of the most recent migrants have settled in the Chalvey, Diamond Road and Wellington Street areas. (See Figure 2.2.2).

The industrial development and demography of Rotherham and Slough are quite different. Rotherham lies in the heart of the heart of the 'industrial north', it has a long established industrial tradition, and for the most part an indigenous population unlike Slough, where most of the industrial development and demographic change has occurred over the past sixty years.

Therefore the two towns selected as survey sites, provided scope for not only a regional comparison of unattractive townscape preferences, but an investigation of the 'demographic effect' on preferences of lower socio-economic classes.

Financial considerations were also important in selecting the survey sites, Rotherham and Slough were within commuting distance of the author's research bases Doncaster and London.

The main consideration in choosing a suitable sampling frame, was to make certain that it identified only the lower socio-economic residents of the two survey sites. It was therefore based on council-housing estates, working on the assumption that the lower social classes were more likely to rent council property and less likely to reside as owner-occupiers in predominantly private residential areas.

Council housing areas were identified in both Rotherham and Slough. Then, using the electoral register and random number tables, a number of wards, then streets, in each town were randomly selected for sampling. On account of the nature of the preference test (it suited 'indoor' rather than 'door-step' interviews), and the length of time required to complete each interview, letters of introduction were sent to households selected by the sampling frame. It was hoped that this introductory approach would improve the response rate and avoid time-consuming repetitive door-step explanations about the purpose and form of the interview. Initially only every third household along a randomly selected street was approached, but the high non-response and interview refusal rate made it necessary to modify this sampling frame. In the main survey, each household, along each of the randomly selected streets in council estates, was notified by letter and approached for interview (See Figures 2.2.1 and 2.2.2).

The sampling fraction was selected on the basis that it was large enough to allow any preference patterns to emerge and yet needed to remain manageable, given the limited time and manpower available for the collection of the survey data. The survey sample total was set at two hundred and forty; one hundred and twenty respondents from each survey town. Although this sample represented a low proportion of the total population of Rotherham (0.048%) and Slough (0.12%) it proved sufficient to test the study objectives. As the time allocated to data collection in the research programme, had to be extended to accommodate the poor response rate (see Table 2.4.1) and the length of time required to complete each interview (1-1¼ hours), the sample fraction could not have been increased.

Asian householders were excluded from the sampling frame. In view of the language problem and the need to interview a sufficiently large enough number of Asians to ascertain a representative Asian community reaction to unattractive townscapes, it was considered unfeasible to include an Asian subsample in the Rotherham and Slough respondent samples.

Household occupiers over the age of sixteen were interviewed and in some cases two household residents were present during the interview. On such occasions, it was determined at the start of the interview whether one or both occupiers would participate. If both consented to do so, preference selections and explanations were recorded separately for each individual. When one

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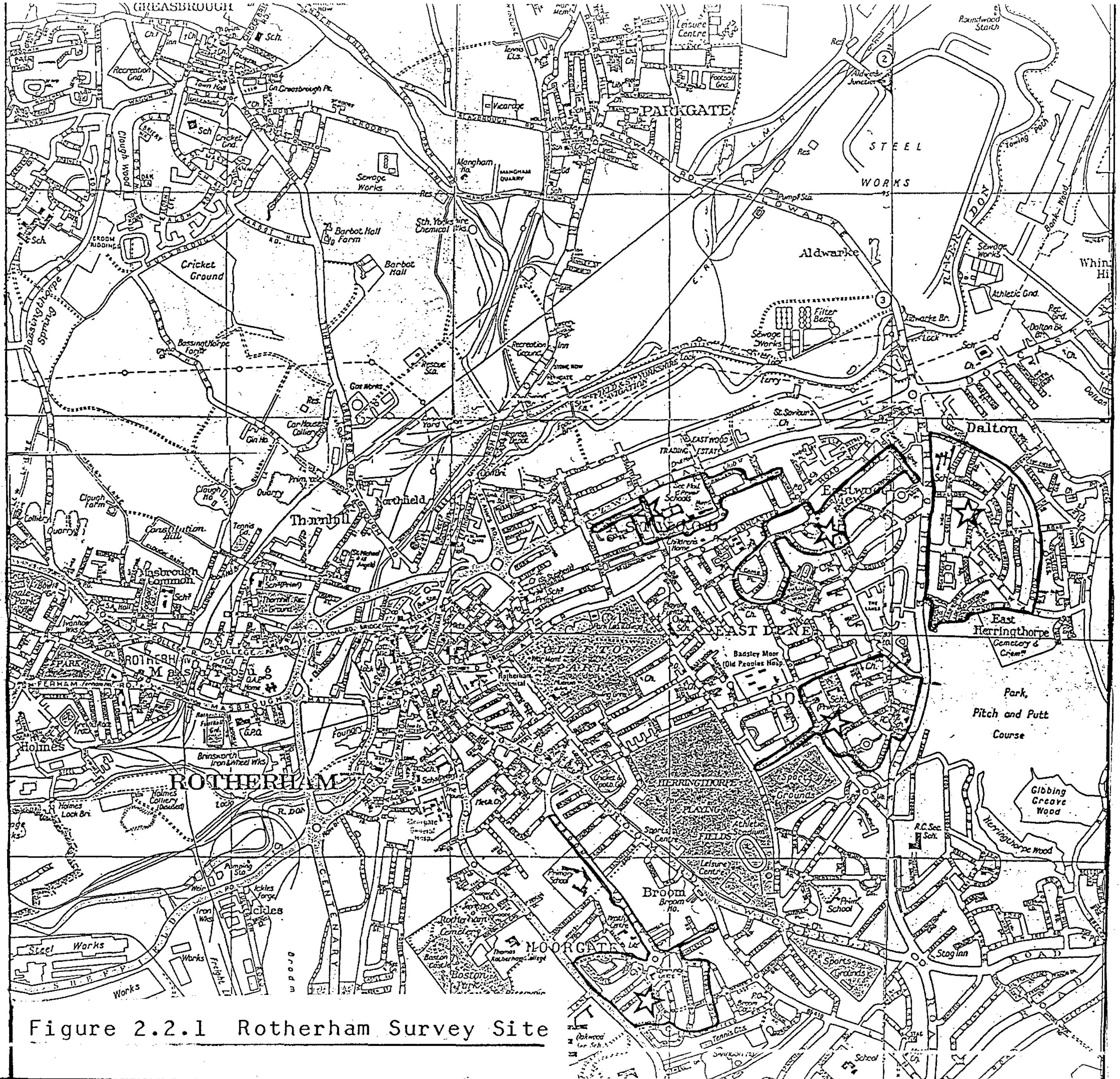


Figure 2.2.1 Rotherham Survey Site

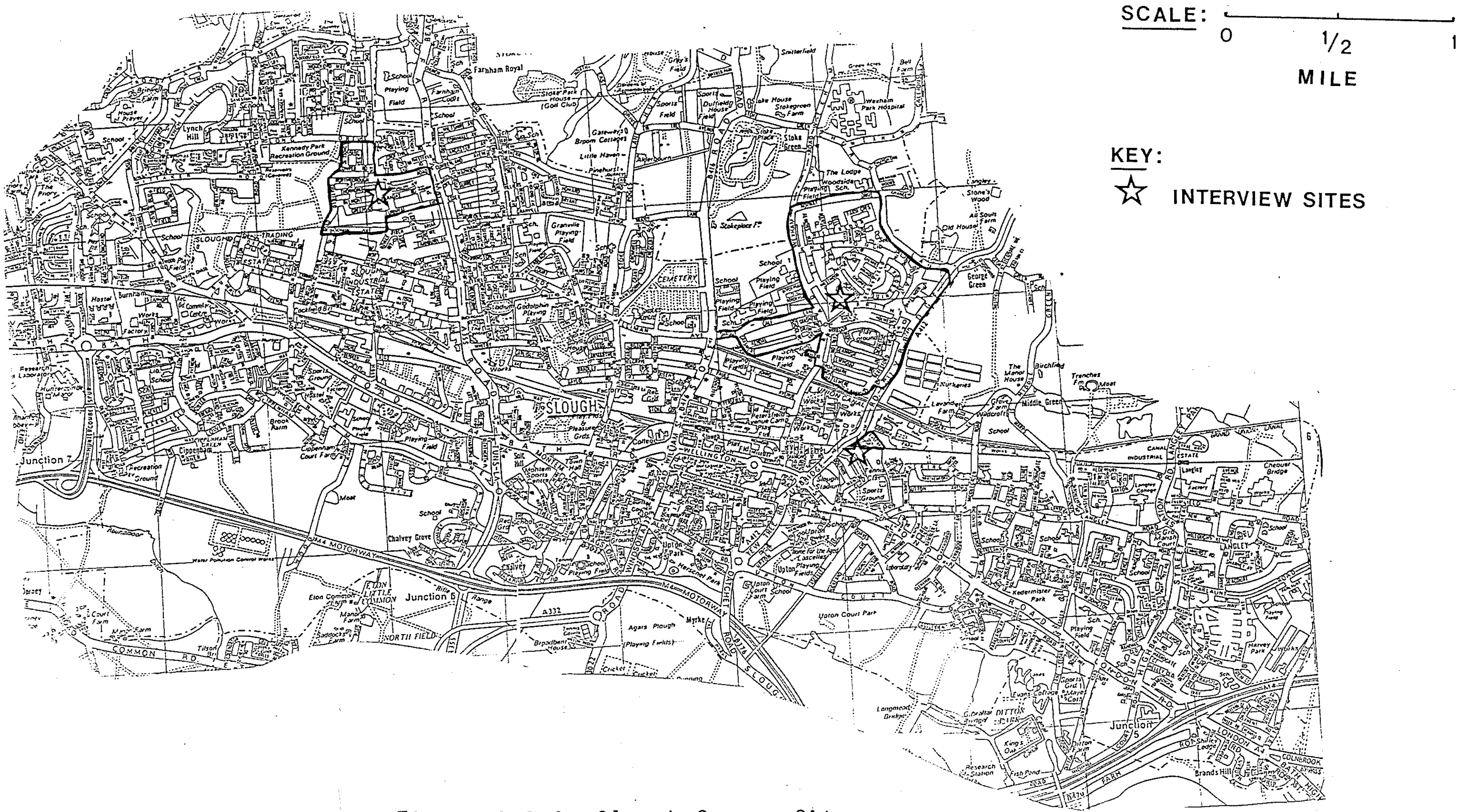


Figure 2.2.2 Slough Survey Site

respondent clearly influenced the judgements and response of his/her companion, only the dominant individual's preference data was used.

2.3 Identification of Unattractive Townscape Views: the pilot survey.

Photographic surrogates have been widely used in landscape evaluation, preference and perception studies, and their representativeness of real-life environment, has been well documented. Shafer et al (1969, 1973) used photographs to produce a model for predicting landscape preference and concluded that photographs could be used with a high level of accuracy to predict preferences for real-life landscapes. Coughlin and Goldstein (1970) reached similar conclusions when they used photographic surrogates in their study of the extent of agreement on the attractiveness of environmental scenes. The efficiency of photographs as surrogates of real landscapes was examined by Dunn (1976), by comparing landscape photograph preference ratings with on-site preference ratings. He found a high level of similarity between the two rating methods which has further supported the view that landscape photographs are effective and adequate surrogates of real landscapes.

In light of such successful applications of photograph surrogates in environmental preference studies, a set of ten colour photographs representing unattractive views in Rotherham and Slough, were employed in the preference test. A standard set of townscape photographs ensured the comparability of results. The alternative means of eliciting environmental preferences, direct on-site preference assessment, was neither economically feasible nor practical. On-site preference assessment restricts the respondent sample to a manageable number of people who can be easily transported to and from the survey sites assessed. It can also suffer from problems of respondent interaction (Lowenthal and Riel, 1972). The size of Rotherham and Slough samples and the distance between the survey sites was too greatfor this method.

It was essential to identify and photograph Rotherham and Slough townscape views that would be considered to be un-attractive by the lower socio-economic residents of those towns. The views were therefore identified by a sub sample of the towns' lower socio-economic sample. In a pilot survey, council-housed residents, were randomly selected and asked to list the six most unattractive views or features in their town, and to explain why they were considered unpleasant to look at. Respondents were also required to complete a pilot questionnaire.

A total of twelve respondents in each town were interviewed. No respondent identified more than four unattractive views and most supplied only two. Rotherham respondents identified a total of eighteen different unattractive scenes (see Table 2.3.1) and Slough respondents identified twelve (see Table 2.3.2). In some cases the views referred to a particular aspect of a district or the town in general; others related to specific townscape features.

Unattractive View	No.of respondents who identified the view
* Parkgate - derelict industrial sites	(4)
* Fitzwilliam Road - derelict houses	(3)
* Frederick Street - boarded up, derelict site	(3)
* Civic Offices and Library buildings	(3)
* Eastwood trading estate	(3)
Parkgate slag heaps	(2)
* Bus Station and car park	(2)
dirty houses along Herringthorpe Valley Road	(2)
Effingham Square - old property	(1)
Wash Lane sewage works	(1)
St Ann's Road - bricked-up houses	(1)
Chantry Bridge - untidy	(1)
Crematorium	(1)
Masbrough	(1)
Town Hall	(1)
British Steel Works Ltd	(1)
Sheffield Road - areas of rubble	(1)
Oakhill Estate - graffiti	(1)

Table 2.3.1 Unattractive Rotherham Views Identified by the Pilot Survey Sample

*photographed and displayed in the preference test

Unattractive View	No.of respondents who identified the view
* Queensmere shopping centre	(4)
* Slough trading estate	(3)
* Derelict shops and houses, Crown Corner	(3)
* High Street	(2)
Chalvey	(2)
St Mary's Church Yard	(1)
Untidy hedge along Uxbridge Road	(1)
Streets leading off High Street - run down old terraced housing	(1)
Farnham Road	(1)
Littered streets	(1)
Subways	(1)
Bus Station	(1)

Table 2.3.2 Unattractive Slough Views Identified by the Pilot Survey Sample

*photographed and displayed in the preference test.

Photographs were taken of the most frequently listed views on 35 mm film using a Practica camera with a wide angle and standard lens. A total of eighty photographs were taken in dry weather conditions, at different times of the day during September 1981. No attempt was made to take photographs from locations or angles that would not be visited or seen by a typical passerby. However a deliberate attempt was made to minimise the number of people or animals in the photographs, to avoid the viewers' attention being diverted from the overall physical aspects of the townscapes, to individual characters who just happened to be present when the photograph was taken.

Two parameters determined the total number of photographs in the control set. The set needed to be large enough to represent the variety of unattractive scenes identified by the pilot survey sample but not so large that it produced too many pairing combinations. It was felt that ten photographs producing forty-five different pairing combinations would be sufficiently representative. A larger control set would produce too many paired combinations for a respondent to assess at one sitting.

The control set of ten photographs (displayed in Appendix I) was selected to portray a variety of townscape features considered unattractive by the pilot survey sample of Rotherham and Slough residents. They include views of modern and traditional architecture, industrial sites, shopping centres and derelict or disused property. Photographs of six Rotherham scenes and four Slough scenes were used to depict:

1. Slough trading estate, Edinburgh Avenue
2. Eastwood trading estate, Rotherham
3. Rotherham bus station and car park
4. Rotherham civic offices and public library
5. Slough High Street
6. Queensmere shopping centre
7. Derelict Victorian terraced houses, Fitzwilliam Road, Rotherham
8. Derelict shops and houses, Crown Corner, Slough
9. Boarded-up and derelict site, Frederick Street, Rotherham
10. Parkgate derelict industrial site, Rotherham

The postcard size (150 mm x 100 mm) colour photographs were mounted in pairs in a self adhesive photograph album. A different pair of photographs was displayed on each page and protected by a transparent plastic covering. The order of the pairings was random and the photographs were not numbered but for reference purposes, the album pages were. This presentation method was considered to be the simplest and most practical given the nature of the survey. A preference test which displayed individual or townscape pairings on separate cards would have been cumbersome, confusing and difficult to administer and record simultaneously. The results were recorded on preference response sheets. The explanations for preference selections were also noted.

Respondents encountered few problems in answering the pilot questionnaire. Some amendments were made to produce the main survey questionnaire displayed at Appendix II. The phrasing of question five was improved and the format of section two was modified to facilitate data recording. Double sided copying also made the questionnaire easier to handle in the field.

2.4 The Main Survey

The main survey was carried out in Rotherham and Slough from January to May 1982. The same format was used for each interview. The interviewer began by describing the form of the interview. Respondents were asked to look at pairs of photographs taken in Rotherham and Slough and say which they preferred to look at as views, and why; they then answered questions about themselves and their town.

Respondents frequently asked questions about the photographs during the course of the preference test; 'why were there no nice or pretty views?' or 'why were there so many awful views of Rotherham or Slough?' Each time, they were asked to complete the test and then let the interviewer explain how and why the photographs had been selected. This satisfied most respondents, only two interviewees refused to complete the preference test.

The duration of the interviews varied but an average completion time for the preference test was forty minutes, and twenty minutes for the questionnaire; most interviews lasted over an hour.

The greatest problem encountered during the main survey, and to a lesser extent during the pilot survey, was the poor response rate. Modifications were made to the sampling

	Completed Interviews	Interview refusals	Non-responses	Total
Rotherham	120	111	280	511
Slough	120	162	307	589
Total	240	273	587	1100
	(22%)	(25%)	(53%)	

Table 2.4.1: Main Survey Response Rate

frame after the pilot, every household, instead of every third household along a randomly selected street was approached. Yet in spite of the letter of introduction and enlarged sampling frame work, the overall non-response (53%) and interview refusal rates (25%) remained high, see table 2.4.1. A call-back system was introduced to reduce the large proportion of non-responses but met with only limited success. On average only two interviews could be expected from every ten households approached, and a total of eleven hundred households were approached in order to obtain two hundred and forty interviews.

CHAPTER THREE:

Analysis of MDPREF Scaling Configurations

3. Introduction

A random sample of Rotherham and Slough residents were asked to select preferences from pairs of photographs depicting unattractive townscape views. This chapter is concerned with the multidimensional scaling (MDS) analysis of those preference selections.

The chapter begins by listing the variables and respondent characteristics which were considered likely to influence respondents' preference judgements of unattractive townscapes. The second section explains the MDS approach, the type of data required by the MDPREF point-vector model and the algorithm used to analyse the preference data. The third section describes the MDPREF programme output and the means of interpreting the point-vector solutions it produces. In section four, the effects of the variables and respondent characteristics listed in section one are explored by MDPREF scaling.

The final section summarises the results of these investigations.

3.1 Variable Influences Investigated By Multidimensional Scaling

Several variables were identified as possible influences on the evaluation of unattractive townscape views in the general hypotheses outlined in Chapter One. The effects of the following variables were investigated by MDS:

(i) town of residence;
(ii) respondent sex;
(iii) respondent age;
(iv) indigenous or non-indigenous residence in the interview town;
(v) length of residence in the interview town by non-indigenous residents;
(vi) respondent socio-economic status;
(vii) satisfaction or dissatisfaction with residence in the interview town;
(viii) favourable or unfavourable attitude towards the appearance of the interview town;
(ix) environmental experience.

In order to ascertain the effects of the variables on preference judgements, MDS was performed on the preferences of respondents sharing similar variable characteristics. In considering the effect of the 'age' variable for example, respondents were sorted into the four age groups studied: 16-30 years, 31-50 years, 51-65 years and 66-81 years. The preference data of each respondent age group was put into separate MDS programmes. Each of the four programmes were run and the final configurations of the MDS solutions were compared to assess the nature and extent of effect of age on preference judgements.

To determine the effects of the nine variables listed overleaf, respondents were sorted according to one or more shared variable characteristics. MDS was then performed on the preference data of these respondent groupings. For instance when the effect of sex and town of residence on the preferences of respondents aged 16-30 years was investigated, separate MDS solutions were produced for all respondents aged 16-30 years (3.4.3.1), males and females within the age group (3.4.4.3) and Rotherham and Slough residents aged 16-30 years (3.4.5.3). The MDS investigations described later in this Chapter (3.4) are based on the following respondent groupings:

(i) town of residence (3.4.1)
(ii) town and sex (3.4.2)
(iii) age (3.4.3)
(iv) sex and age (3.4.4)
(v) town and age (3.4.5)
(vi) town, sex and age (3.4.6)
(vii) indigenous and non-indigenous residence (3.4.7)
(viii) indigenous or non-indigenous residence and sex (3.4.8)
(ix) length of residence of non-indigenous residents (3.4.9)
(x) socio-economic grouping (3.4.10)
(xi) town and socio-economic grouping (3.4.11)
(xii) satisfaction or dissatisfaction with residence in the interview town (3.4.12)

(xiii) favourable or unfavourable attitudes towards the appearance of the interview town (3.4.13)

(xiv) environmental experience - non-local visiting frequency (3.4.14)

(xv) town and environmental experience - non-local visiting frequency (3.4.15)

3.2 The MDPREF Programme

The development of multi-dimensional scaling and the theory, assumptions and applications of the analysis technique have been outlined in Chapter Two (2.1). This section describes the MDPREF programme used to analyse the paired comparison preference data.

MDPREF is an 'internal' approach to Multi-Dimensional PREFerence scaling. It simultaneously places stimulus points and subject vectors ("person-points") into a joint space using only preference data (Green and Rao, 1972) In 'external' MDS approaches such as PREFMAP, both similarity and preference data are required to produce the joint space of stimuli and subjects; subject-vectors are positioned into a space already obtained from the preceding analysis of similarities data.

The different point-vector models of internal and external MDS programmes affect the way the MDS solutions are interpreted.

In the external approach, the position of the subject-vectors may be explained in respect of stimuli locations because the subject vectors are sited within an already 'fixed' reference configuration. However in the internal approach, the stimuli locations are not fixed. Stimulus points are positioned so that the maximum number of subjects' preferences fit well in the joint space. Therefore in this approach, the stimuli configuration may only be interpreted in strict association with the position of the subject vectors.

MDPREF uses 'two-way' preference data, a data form which may be supplied by a single (row-conditional) matrix. MDPREF uses matrices which are either row-conditional, a single rectangular (R x n) matrix of 'R' preference rankings and 'n' subjects, or uses square paired-comparison matrices in which the rows and columns refer to the same entities. As the preference test adopted in this study and described in section 2.1, produced paired-comparison preference selections, different sets of square paired-comparison matrices were used in each MDPREF programme run.

Moving on to discuss the principles underlying MDPREF data processing, the main purpose of a 'scalar-products' (point-vector) model is that it represents stimuli and subjects in a common joint space. For a specified number of dimensions, a point-vector solution (or configuration) will portray 'p' stimulus points with 'n' subjects' preference rankings depicted by vectors which pass through the axes point of origin. Dimensionality is determined by the programme user on the basis of the roots of the 'First Score Matrix' (see 3.3.1). The optimal dimensionality is the lowest acceptable one; for reasons outlined in section 3.3.2, two dimensional scaling was considered to be adequate for the MDPREF analyses performed in this investigation.

In two dimensional MDPREF configurations, the end points, or subject vector termini are 'normalised' to unit length to lie on the perimeter of a circle. The siting of any subject vector is such that the stimuli projections on to it, represent the best possible fit with the subject's preference ranking. The direction of the vector is very important as it indicates the direction of preference from the least preferred to the most preferred stimulus. In doing so, it indicates the way in which a subject combines or trades-off stimuli characteristics in making his/her preference selection. The extent of such trade-offs may be measured by the cosine of the angle between the subject-vector and dimension axes, similarly the linear correlation between two subject vectors may be measured by the cosine of the angle between them.

Finally the data is transformed into distances which can be plotted on a graphic configuration. The transformation procedure 'normally matches the level of measurement of the data' (Coxon, 1982). A 'linear' transformation using internal scale measurement data, ensures that any information regarding the equality of the data is not lost in the transformation process. In other words, it ensures that differences equal in the original data, remain equal after linear transformation (Coxon, 1982, p.127)

3.3 MDPREF Programme Output

This section describes the MDPREF output and the procedures for interpreting that output.

3.3.1 Description

The processed data takes the following forms:

(i) First Score Matrix (figure 3.3.11)
(ii) Major and minor product moment matrices
(iii) latent roots of the product moment matrices
(iv) Second Score Matrix (figure 3.3.1.3)
(v) residuals matrix (figure 3.3.31.4 and Shepard diagram (figure 3.3.1.5)
(vi) configuration of subjects (figure 3.3.1.6)
(vii) configuration of stimuli (figure 3.3.1.7)
(viii) configuration of subjects and stimuli (figure 3.3.1.8)

Fig.3.3.1.1 First Score Matrix MDPREF 33 Run On Slough Females Aged 16-30 years

FIRST SCORE MATRIX

SUBJECT STIMULUS

	1	2	3	4	5	6	7	8	9	10
1	-14.0000	-6.0000	10.0000	6.0000	18.0000	-2.0000	6.0000	-10.0000	10.0000	-18.0000
2	-2.0000	2.0000	10.0000	14.0000	6.0000	-6.0000	-10.0000	-14.0000	18.0000	-18.0000
3	-14.0000	2.0000	-2.0000	10.0000	18.0000	10.0000	2.0000	-18.0000	-2.0000	-6.0000
4	-6.0000	-6.0000	6.0000	6.0000	14.0000	10.0000	-14.0000	-10.0000	14.0000	-14.0000
5	18.0000	-18.0000	-2.0000	-10.0000	-2.0000	-14.0000	2.0000	10.0000	6.0000	10.0000
6	-6.0000	6.0000	-10.0000	-2.0000	14.0000	-6.0000	-14.0000	18.0000	10.0000	-10.0000
7	2.0000	18.0000	-18.0000	2.0000	2.0000	2.0000	-10.0000	-6.0000	-6.0000	14.0000
8	-10.0000	10.0000	14.0000	-2.0000	18.0000	-2.0000	-14.0000	-18.0000	6.0000	-2.0000
9	-2.0000	6.0000	-6.0000	10.0000	18.0000	14.0000	-10.0000	-10.0000	-2.0000	-18.0000
10	6.0000	-2.0000	18.0000	10.0000	10.0000	-8.0000	-10.0000	-8.0000	2.0000	-18.0000
11	-2.0000	6.0000	-2.0000	10.0000	18.0000	14.0000	-14.0000	-10.0000	-2.0000	-18.0000
12	-10.0000	10.0000	6.0000	10.0000	18.0000	-2.0000	-8.0000	-12.0000	6.0000	-18.0000
13	-14.0000	-6.0000	10.0000	6.0000	18.0000	-2.0000	6.0000	-10.0000	10.0000	-18.0000
14	2.0000	6.0000	14.0000	14.0000	10.0000	-6.0000	-10.0000	-14.0000	2.0000	-18.0000
15	2.0000	-14.0000	-14.0000	18.0000	10.0000	-14.0000	2.0000	2.0000	-6.0000	14.0000
16	14.0000	10.0000	2.0000	18.0000	6.0000	-8.0000	-8.0000	-12.0000	-6.0000	-16.0000

Fig.3.3.1.3 Second Score Matrix MDPREF 33

SECOND SCORE MATRIX

SUBJECT STIMULUS

	1	2	3	4	5	6	7	8	9	10
1	-0.1563	-0.1146	0.4428	0.2334	0.3967	-0.1092	-0.1073	-0.3093	0.3076	-0.5838
2	-0.1717	-0.0448	0.3901	0.2615	0.4316	-0.0597	-0.1509	-0.3433	0.2729	-0.5856
3	-0.2006	0.3286	0.0029	0.3294	0.4846	0.2136	-0.3316	-0.4176	0.0130	-0.4223
4	-0.1904	0.0688	0.2918	0.2975	0.4727	0.0220	-0.2158	-0.3860	0.2075	-0.5681
5	0.1804	-0.4484	0.1791	-0.3059	-0.4280	-0.3058	0.3606	0.3823	0.1109	0.2748
6	-0.2014	0.3162	0.0193	0.3299	0.4873	0.2042	-0.3274	-0.4188	0.0242	-0.4335
7	-0.0191	0.5063	-0.5645	0.0612	0.0216	0.3736	-0.2252	-0.0603	-0.3800	0.2865
8	-0.2007	0.1747	0.1861	0.3200	0.4928	0.0991	-0.2690	-0.4112	0.1368	-0.5285
9	-0.1966	0.3681	-0.0518	0.3258	0.4727	0.2436	-0.3438	-0.4114	-0.0241	-0.3824
10	-0.1551	-0.1192	0.4461	0.2314	0.3941	-0.1124	-0.1043	-0.3069	0.3097	-0.5833
11	-0.1991	0.3451	-0.0195	0.3283	0.4802	0.2261	-0.3370	-0.4155	-0.0022	-0.4064
12	-0.2001	0.1652	0.1961	0.3184	0.4918	0.0922	-0.2645	-0.4096	0.1435	-0.5330
13	-0.1563	-0.1146	0.4428	0.2334	0.3967	-0.1092	-0.1073	-0.3093	0.3076	-0.5838
14	-0.1884	0.0538	0.3057	0.2934	0.4684	0.0111	-0.2076	-0.3813	0.2168	-0.5719
15	0.1756	0.0246	-0.3737	-0.2688	-0.4404	0.0452	0.1630	0.3521	-0.2620	0.5844
16	-0.2932	0.2548	0.0957	0.3289	0.4950	0.1583	-0.3042	-0.4198	0.0759	-0.4815

Stimuli	1	2	3	4	5	6	7	8	9	10
1		1	1	0	0	1	0	1	0	1
2	1		0	0	1	0	1	0	0	X
3	1	0		0	1	1	0	0	1	0
4	0	0	0		1	0	1	0	0	1
5	0	1	1	1		0	1	1	0	1
6	1	0	1	0	0		1	1	1	1
7	0	1	0	1	1	1		0	1	1
8	1	0	0	0	1	1	0		0	1
9	0	0	1	0	0	1	1	0		0
10	1	X	0	1	1	1	1	1	0	

Key "1" is preferable to "0"
"X" preference rating is the same for both stimuli

Fig.3.3.1.2 MDPREF Stimuli Matrix for Respondent S27

Fig.3.3.1.4 Residuals Matrix MDPREF 33 Run On Slough Female Aged 16-30 years

RESIDUALS MATRIX (FIRST SCORE - SECOND SCORE)

	1	2	3	4	5	6	7	8	9	10
1	-13.8437	-5.8854	9.5572	5.7666	17.6033	-1.8908	6.1073	-9.6907	9.6924	-17.4162
2	-1.8283	2.0448	9.6099	13.7385	5.5684	-5.9403	-9.8491	-13.6567	17.7271	-17.4144
3	-13.7994	1.6714	-2.0029	9.6706	17.5154	9.7864	2.3316	-17.5824	-2.0130	-5.5777
4	-5.8096	-6.0688	5.7082	5.7025	13.5273	9.9780	-13.7842	-9.6140	13.7925	-13.4319
5	17.8196	-17.5516	-2.1791	-9.6941	-1.5720	-13.6942	1.6394	9.6177	5.8891	9.7252
6	-5.7986	5.6838	-10.0193	-2.3299	13.5127	-6.2042	-13.6726	18.4188	9.9758	-9.5665
7	2.0191	17.4937	-17.4355	1.9388	1.9784	1.6264	-9.7748	-5.9397	-5.6200	13.7135
8	-9.7993	9.8253	13.8139	-2.3200	17.5072	-2.0991	-13.7310	-17.5888	5.8632	-1.4715
9	-1.8034	5.6319	-5.9482	9.6742	17.5273	13.7564	-9.6562	-9.5886	-1.9759	-17.6176
10	6.1551	-1.8808	17.5539	9.7686	9.6059	-7.8876	-9.8957	-7.6931	1.6903	-17.4167
11	-1.8009	5.6549	-1.9805	9.6717	17.5198	13.7739	-13.6630	-9.5845	-1.9978	-17.5936
12	-9.7999	9.8348	5.8039	9.6816	17.5082	-2.0922	-7.7355	-11.5904	5.8565	-17.4670
13	-13.8437	-5.8854	9.5572	5.7666	17.6033	-1.8908	6.1073	-9.6907	9.6924	-17.4162
14	2.1884	5.9462	13.6943	13.7066	9.5316	-6.0111	-9.7924	-13.6187	1.7832	-17.4281
15	1.8244	-14.0246	-13.6263	18.2688	10.4404	-14.0452	1.8370	1.6479	-5.7380	13.4156
16	14.2032	9.7452	1.9043	17.6711	5.5050	-8.1583	-7.6958	-11.5802	-6.0759	-15.5185

Fig.5.5.1.5 Shepard Diagram MDPREF 33 Run On Slough Females Aged 16-30 Years

MDPREF PRINT & PLOT OPTIONS

MDPREF RUN ON SLOUGH FEMALES AGED 16-30 YRS

FIRST SCORE

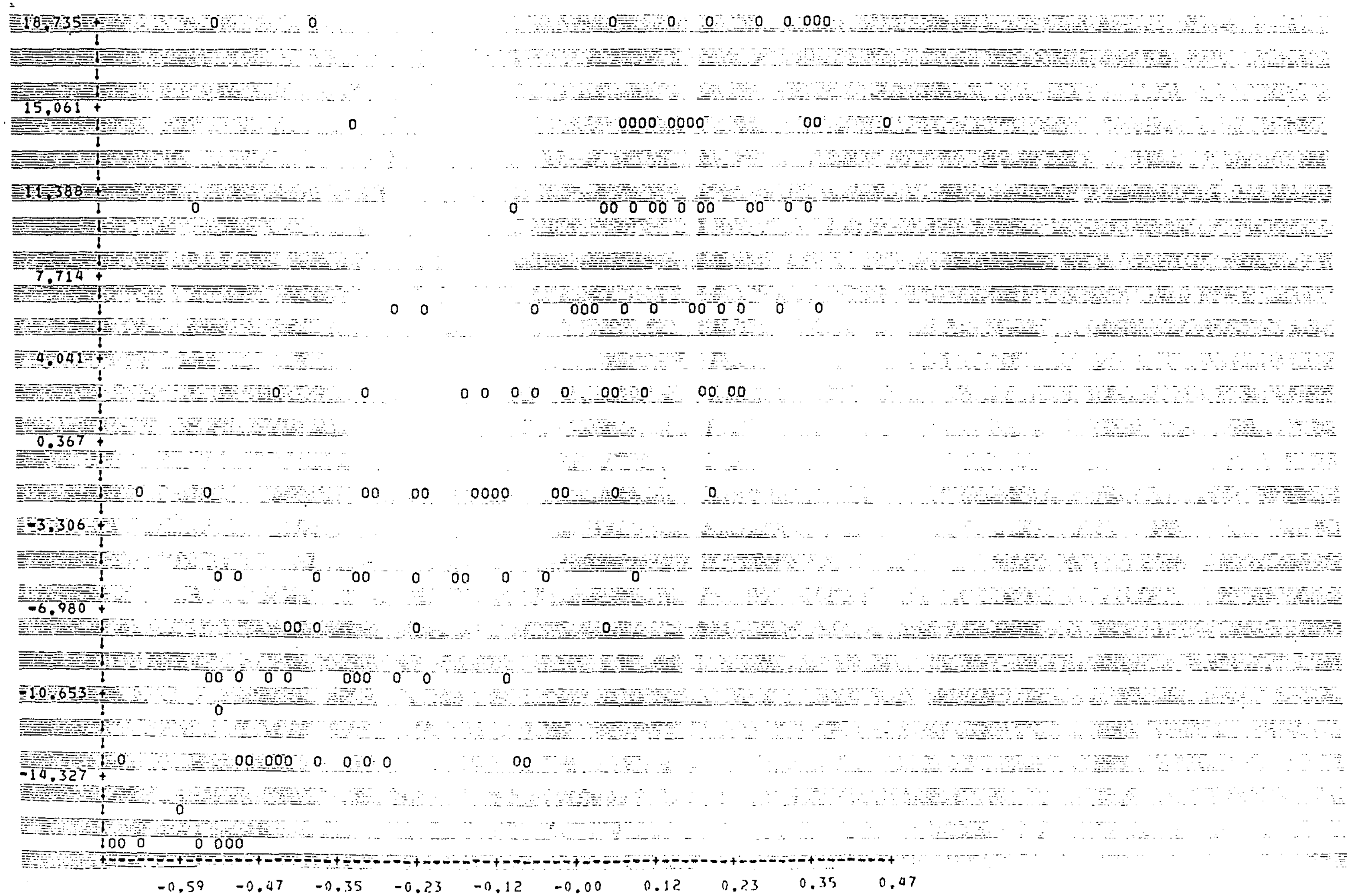


Fig.3.3.1.6 Configuration of Subjects MDPREF 33 Run On Slough Females Aged 16-30 years

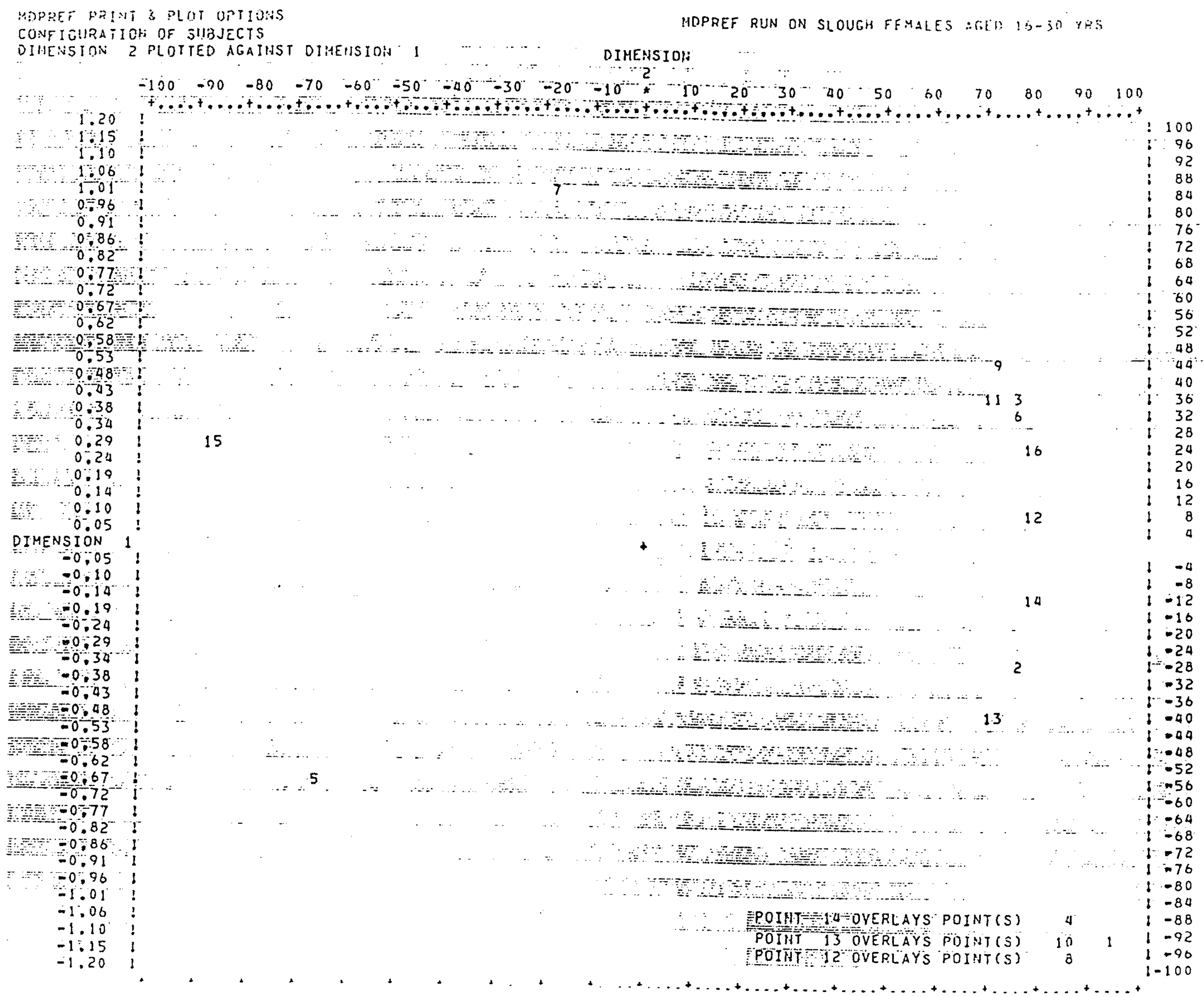
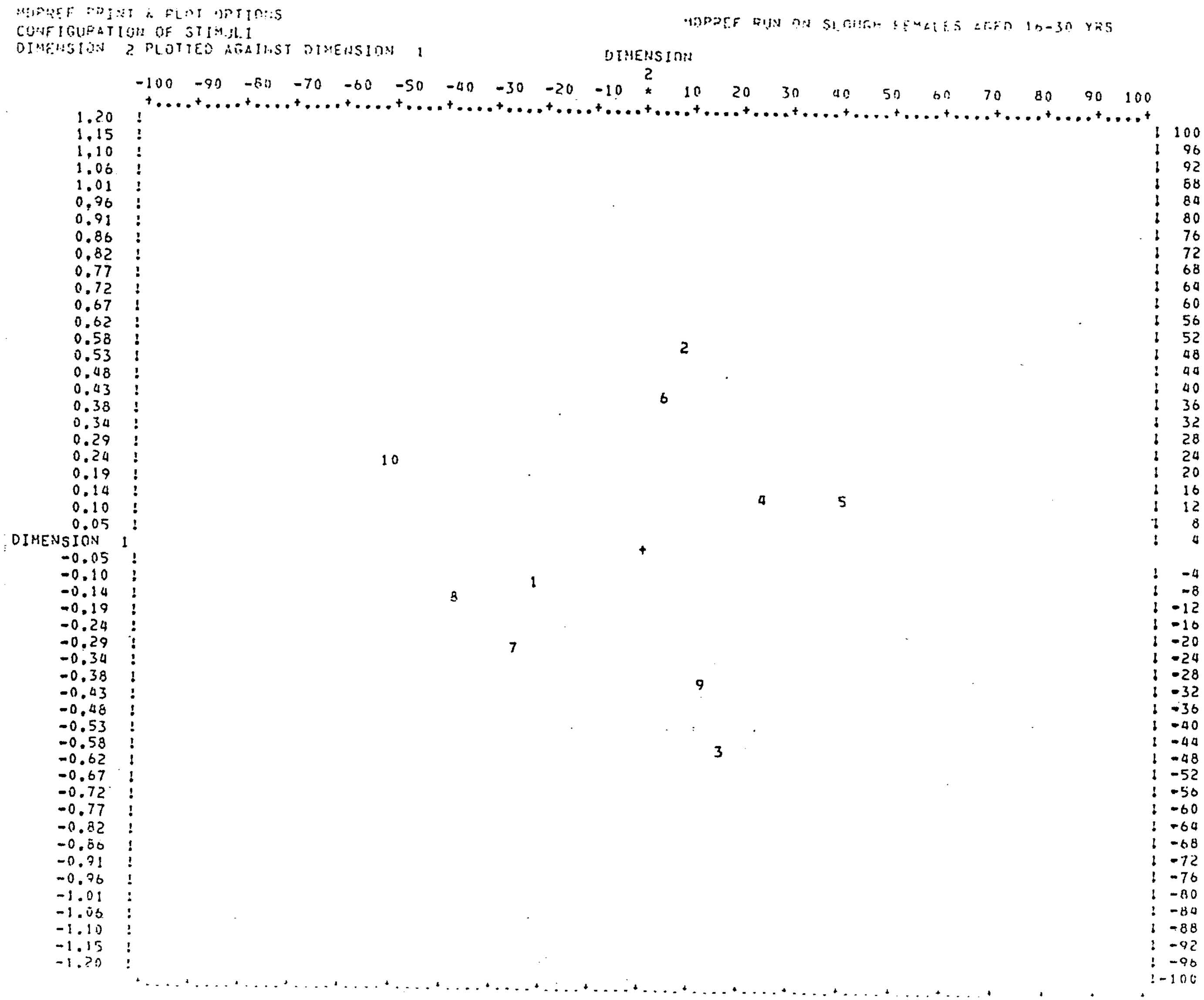


Fig.3.3.1.7 Configuration of Stimuli MDPREF 33 Run On Slough Females Aged 16-30 years



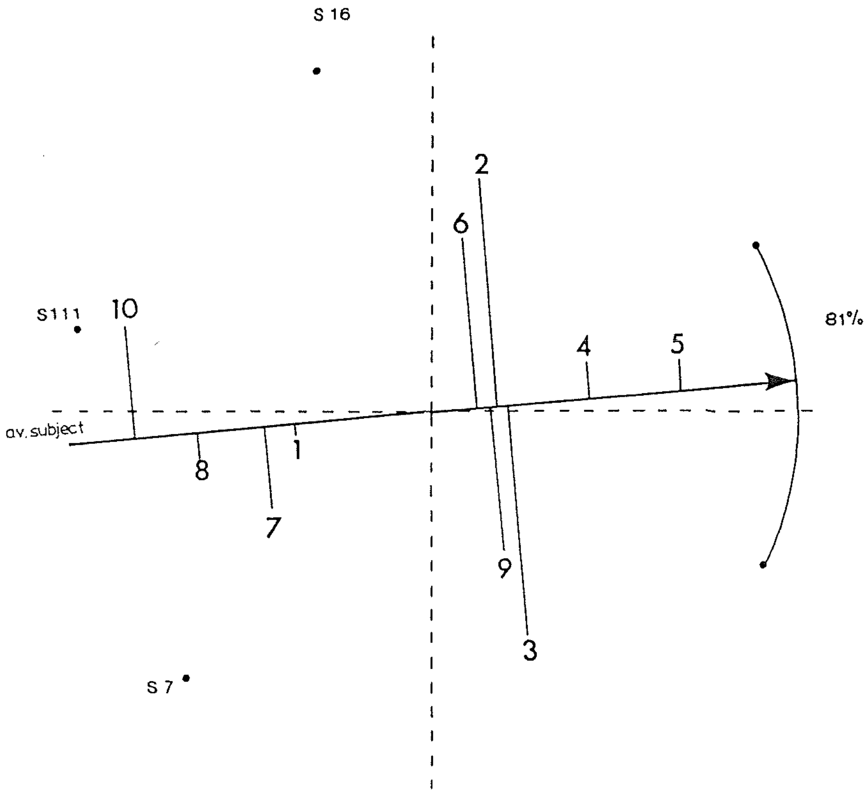


Fig.3.3.1.8 Configuration of Subjects & Stimuli: MDPREF 33 Run On Slough Females Aged 16-30 years

The 'First Score Matrix' is obtained by reducing the set of paired-comparison dominance (one-mode) matrices into a single two-mode matrix of preference rankings of a set of 'p' stimulus points, made by 'n' subjects. A 'two-mode' data matrix is a rectangular matrix where the rows and columns refer to two quite different sets of entities. In the First Score matrix (figure 3.3.1.1) the rows refer to the members of the group preferences under investigation (Slough females aged 16-30 years) and the columns refer to the ten environmental stimuli (townscape photographs) used in the preference test. The one-mode matrix in figure 3.3.1.2 differs in two respects: it is square and it s rows and columns refer to the same entity, the ten environmental stimuli presented in the preference test.

The MDPREF algorithm produces the major and minor product moment matrices from the two-mode First Score Matrix data. From these three matrices (cross product matrix of subjects, correlation matrix of subjects and cross product matrix of stimuli) the latent roots are obtained. The roots and the percentage of the total variance accounted for by the roots, indicate the lowest acceptable dimensionality of the data. MDS, like principal components analysis, seeks a solution with the lowest possible dimensionality that accounts for the largest possible variance within the data set. An adequate two dimensional solution is therefore clearly preferable to a three or higher dimensional solution, simply in terms of the ease of visual representation of that solution.

A decomposition, or principal components analysis of the correlation matrices produces the location of the stimulus points and subject vectors in a joint space. This 'Second Score Matrix' best fits the data into the number of dimensions specified by the user at the start of the programme. The subject and stimuli matrices list the subject-vector and stimulus points coordinates on the dimensions selected.

The residuals matrix (First Score Matrix minus the Second Score Matrix) in figure 3.3.1.4 provides the data plotted on the Shepard diagram in figure 3.3.1.5. This scatter-graph depicts how well the original data fits the transformation process, where respondent's stimuli preference ratings are transformed to distanced stimuli projections along a subject vector.

Finally MDPREF produces three types of configuration solutions. The first depicts subjects only (figure 3.3.1.6), the second depicts the stimuli only (figure 3.3.1.7) and the third displays a configuration of subjects and stimuli in joint space (figure 3.3.1.8). The number of solutions produced varies according to the specified dimensionality as dimensions are plotted against each other. For example if a three dimensional solution was required, the configurations would plot dimension one against dimensions two and three, and dimension two against dimension three. Remembering that MDPREF is an internal form of MDS, the positions of the stimuli in the configuration solutions are not fixed, they only represent the best possible fit with the preference rankings of a given set of subject vectors. As such, the MDPREF analyses performed in Section 3.4 use only the joint stimuli and subject configuration and directly relate the stimuli positions to the average subject vector (3.3.2) of each group of respondent preferences investigated.

3.3.2 Interpretation

One of the initial steps in any MDS analysis is to check the adequacy of the dimensionality. The First Score Matrices roots (referred to in 3.3.1) provide this information. Tables 3.3.2.1, 3.3.2.2, 3.3.2.3, 3.3.2.4 and 3.3.2.5 show the first score matrices roots for the two dimensional scaling performed in this study. Columns '3' to '11' indicate the percentage of the variance accounted for by the first nine dimensions. For a large proportion of the respondent groups, two dimension variance scores are high (greater than 70% of the total variance). In fact in seventy-nine (72%) of the hundred and ten MDPREF programmes, the first and second dimensions account for over 70% of the total data variance (see table 3.2.2.6); twenty-eight programmes (25%) have variance scores ranging from 60 - 69.9%; and only three programmes have variance scores below 60%.

When choosing the optimal dimensionality for the MDPREF scaling, the ease of visually representing and interpreting two dimensional scaling solutions, with their slightly lower data variance scores, was weighed against the slight improvement in explanatory power of the visually complicated three dimensional solutions. MDPREF scaling is therefore restricted to two dimensions as this provides adequate dimensionality, easy diagrammatic representation and facilitates interpretation and comprehension.

In two dimensional scaling subject vectors are normalised to unit length so that their termini points lie on the perimeter of a circle. When a large proportion of the subject-vectors are located in a small area of the circle, it indicates a high consensus of agreement among those subjects' preferences for the particular set of stimulus points. Conversely, when the subject-vector termini are unevenly distributed around the circle perimeter, it indicates disagreement between the subjects.

Using a 360° compass-bearing measurement scale to describe the subject-vector spread, the following are measured:

(i) overall subject-vector termini (preference) range
(ii) overall subject-vector termini (preference) range discounting subject-vector extremes

(iii) area of greatest concentration of subject-vectors (preference consensus)

In some solutions the overall subject-vector range is disproportionately affected by one or more 'extreme' subject-vector's preferences. These extreme vectors are quite distinct and apart from the main subject-vector spread. In such cases, the overall subject-vector preference range is measured a second time, discounting the subject-vector extremes.

In each configuration analysis, an average subject-vector is selected. It is usually a subject-vector termini point located at the centre of the area of termini points concentration, or preference judgements consensus. The projections of the stimulus points on to the average subject vector are recorded, moving backwards from the termini, through the origin of space, to the other side of the circle. The stimuli projections are then analysed in respect of their order along the average subject vector, from the least preferred to the most preferred stimuli and any clustering of stimulus points noted.

For each variable under investigation, the results of the MDPREF analysis for each respondent group associated with that variable, are compared to assess the nature and extent of the variable's influence on preference judgements. For example when assessing the effect of age on preference judgements, the results of the MDPREF analyses of each of the four respondent age groups are compared.

The samples of respondent preferences analysed by MDPREF were identified from respondent characteristic (or variable) listings produced by the Statistical Package for Social Sciences (S.P.S.S.) analysis of the questionnaire data. For example, when the effect of sex on respondent preferences was investigated, S.P.S.S. listings of male and female respondents (by reference number) identified the individual respondent paired-comparison preference matrices required by the MDPREF programmes investigating male and female preferences. When the effects of two or more variables on preferences were investigated, the same procedure was adopted. S.P.S.S. listings identified the respondents contained within the sample under investigation, then the relevant respondent preference matrices were copied into the MDPREF programmes for analysis.

Table 3.3.2.1 First Score Matrix Roots for Programmes MDPREF 1 To MDPREF 21

Col.1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	13.
MDPREF PROG NUMBER	SUB-GROUP	R O O T S (% OF TOTAL VARIANCE)										VARIANCE DIMS 1+2(%)	1+2+3(%)
1	100 R&S Residents	67.2	7.2	6.6	5.2	4.7	3.2	2.4	1.8	1.3		73.4	80
2	100 R Residents	70.3	6.2	5.5	5.4	3.4	3.2	2.3	2	1.3		76.5	82
3	100 S Residents	55.6	10.3	8.5	6.2	5.5	4.8	3.6	2.7	2.4		65.9	74.4
4	80 R & S Males	63	7.9	6.9	5.8	4.5	3.5	3	2.7	2.4		70.9	77.8
5	80 R & S Females	56.9	9.9	8	6.2	5.1	4.7	4.2	2.6	2		66.8	74.8
6	R Males	72.7	5.6	5.1	4.7	3	2.8	2.5	1.9	1.3		78.3	83.4
7	R Females	68	8	6.4	5.3	3.6	2.8	2.2	1.9	1.4		76	82.4
8	S Males	55.7	11	9.6	7.3	5.4	4	2.8	2.4	1.3		66.7	76.3
9	S Females	53.1	12.2	8.7	6.1	4.8	4.6	4.2	3.3	2.6		65.3	74
10	Residents 16-30yrs	53.6	11.1	8.4	7.8	6.2	4.6	4.1	2.3	1.5		64.7	73.1
11	Residents 31-50yrs	60.4	10.6	7.7	6.3	4.1	3.9	2.8	2.2	1.6		71	78.7
12	Residents 51-65yrs	64	8.3	7.3	6.1	4.6	3.3	2.5	1.9	1.6		72.3	79.6
13	Residents 66-81yrs	67.4	6.9	6.7	4.7	3.8	3.2	3	2.1	1.8		74.3	81
14	All males 16-30yrs	51.9	19.4	13.8	5.0	4.7	2.3	1.5	0.8	0.1		71.3	85.1
15	All females 16-30yr	55.4	11.9	8.8	7.6	5	4.5	2.9	2.1	1.4		67.3	76.1
16	All males 31-50yrs	66.3	10.6	7.6	4.7	4.1	2.6	1.9	1.1	0.7		76.9	84.5
17	All females 31-50yr	58.1	11.3	9.0	7.2	4.1	3.4	3.1	2.4	1		69.4	78.4
18	All males 51-65yrs	68.6	8.5	7.8	5.4	3.8	2.1	1.8	1	0.5		77.1	84.9
19	All females 51-65yr	61.6	10.8	7.5	5.4	4.5	3.7	3.3	1.6	1.1		72.4	79.9
20	All males 66-81yrs	66	7.8	7.1	5.1	4.3	3.8	2.8	1.7	1		73.8	80.9
21	All females 66-81yr	69.4	8.1	6.6	5.1	4.3	2.5	2	0.8	0.8		77.5	84.1

Table 3.3.2.2 First Score Matrix Roots for Programmes MDPREF 22 to MDPREF 45

Col.1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	13.
MDPREF PROG NUMBER	SUB-GROUP	R O O T S (% OF TOTAL VARIANCE)										VARIANCE DIMS 1+2(%)	1+2+3(%)
22	R Residents 16-30yr	69	9.8	7	6.3	2.9	2.1	1.6	0.6	0.3		78.8	85.8
23	S Residents 16-30yr	45.8	14	10.2	9.7	7.4	5	3.9	2.6	1		59.8	70
24	R Residents 31-50yr	72.1	8.1	5.4	4	2.8	2.6	2.2	1.5	0.9		80.2	85.6
25	S Residents 31-50yr	52.6	14.3	8.9	7.8	5.3	4.2	3.2	2.1	1.2		66.9	75.8
26	R Residents 51-65yr	70.6	7.5	5.9	4.6	3.9	2.6	2.2	1.4	0.7		78.1	84
27	S Residents 51-65yr	56.8	12.6	10.1	6	5.3	3.2	2.2	1.9	1.5		69.4	79.5
28	R Residents 66-81yr	69.9	7.9	6.4	5.2	2.9	2.5	2.2	1.5	1.1		77.8	84.2
29	S Residents 66-81yr	65.4	9.3	7	5.3	4.7	2.9	2.4	1.5	1.1		74.7	81.7
30	R Males 16-30yrs	85.1	8.1	4.1	2.6							93.2	97.5
31	R Females 16-30yrs	66.1	12.2	7.9	6.8	3.1	1.4	1.4	0.4	0.2		78.3	86.2
32	S Males 16-30yrs	40.8	25.9	17.2	5.9	5.8	2.6	1.5				66.7	83.9
33	S Females 16-30yrs	53.8	12.7	9.5	7.6	6.6	4.2	2.7	1.6	0.7		66.5	76
34	R Males 31-50yrs	75.2	8.7	7.6	3.3	2.3	1.4	0.8	0.2			83.9	91.5
35	R Females 31-50yrs	71.5	9.9	5.2	4.5	2.6	2.5	1.7	1.1	0.7		81.4	86.6
36	S Males 31-50yrs	63.3	15.7	8.3	6.4	2.7	1.5	1.1	0.4	0.1		79	87.3
37	S Females 31-50yrs	49.5	15.7	9.8	9.3	5.3	4.1	3.4	1.8	0.7		65.2	75
38	R Males 51-65yrs	77.8	7.3	6	3.5	2.7	1	0.7	0.3	0.2		85.1	92.4
39	R Females 51-65yrs	66.2	9.7	7.1	5.7	3.6	3.4	2.3	0.9	0.7		75.9	85.6
40	S Males 51-65yrs	63.3	16.4	7.1	5	4.1	1.7	1.6	0.2			79.7	86.8
41	S Females 51-65yrs	57.3	15.6	9.3	6.4	3.5	2.8	2.1	1.6	1		72.9	82.2
42	R Males 66-81yrs	66.7	9.7	9.2	4.8	3.7	2.5	1.3	1	0.6		76.4	85.6
43	R Females 66-81yrs	75.9	9.1	7	4.1	2.1	1	0.3	0.1			85	92
44	S Males 66-81yrs	65.8	13.1	10.3	4	3.1	1.8	1	0.3	0.1		78.9	89.2
45	S Females 66-81yrs	66.5	11.7	7.5	6	2.7	2.2	1.7	0.8	0.4		78.2	85.7

Table 3.3.2.3 First Score Matrix Roots for Programmes MDPREF 46 to MDPREF 66

Col.1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	13.
MDPREF PROG NUMBER	SUB-GROUP	R O O T S (% OF TOTAL VARIANCE)										VARIANCE DIMS 1+2(%)	1+2+3(%)
46	R.Indig.Residents	69.2	6.6	5.9	5.6	3.8	3.4	2.5	1.4	1.2		75.8	81.7
47	R.Non-Indig.Resid.	71.4	7.8	5.3	3.7	3.5	3	2.2	1.7	0.8		79.2	84.5
48	Sl.Indig.Residents	50.3	12.5	9.1	7.7	6.6	5.3	4.6	2	1.2		62.8	71.9
49	Sl.Non-Indig.Resid.	55.6	11.1	8.3	6.1	5	4.5	3.8	3.1	2.1		66.7	75
50	R.Indig.Males	71.6	7.1	5.2	4.9	3.5	2.9	2.3	1.4	0.6		78.7	83.9
51	R.Non-Indig.Males	76.8	8.2	6	2.8	2.4	1.5	1.2	0.5	0.2		85	91
52	R.Indig.Females	67.9	8.5	6.7	5.6	3.6	3.1	2	1.4	0.6		76.4	83.1
53	R.Non-Indig.Females	68.3	10.6	5.9	4.3	3.3	2.8	2	1.5	0.8		78.9	84.8
54	Sl.Indig.Males	53.8	17.5	11.7	8	3.5	3	1.6	0.5			71.3	83
55	Sl.Non-Indig.Males	58.4	12.1	9.7	7.8	4.4	2.8	2.2	1.4	0.9		70.5	80.2
56	Sl.Indig.Females	49.7	14.8	10.1	7.8	6.6	4	3.6	2.4	0.4		64.5	74.6
57	Sl.Non-Indig.Femal.	55	11.3	9.1	6.2	5.1	4.1	3.9	2.9	2		66.3	75.4
58	R.Non-Indig.2-5yrs	85	14.9									99.9	
59	R.Non-Indig.16-30yr	74.2	9.4	6.6	3.7	2.1	1.7	0.5				83.6	90.2
60	R.Non-Indig.31yrs+	71.7	7.5	5.6	4.5	3.5	2.6	1.8	1.6	0.7		79.2	84.8
61	Sl.Non-Indig.1-12mth	83.5	16.4									99.9	
62	Sl.Non-Indig.13-24"	60.8	30.7	8.3								91.5	99.8
63	Sl.Non-Indig.2-5yrs	55.4	24	20.5								79.4	99.9
64	Sl.Non-Indig.6-15yr	56.1	14.4	11.5	7.9	3.7	3	2	0.7	0.2		70.5	82
65	Sl.Non-Indig.16-30"	50.4	14.4	8.7	8	6.1	4.8	3.9	1.8	1.6		64.8	73.5
66	Sl.Non-Indig.31+yrs	62.3	10.1	8	5.3	4.3	3.6	3	1.7	1.2		72.4	80.4

Table 3.3.2.4 First Score Matrix Roots for Programmes MDPREF 67 to MDPREF 88

Col.1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	13.
MDPREF PROG NUMBER	SUB-GROUP	ROOTS (% OF TOTAL VARIANCE)										VARIANCE DIMS 1+2(%)	1+2+3(%)
67	All Resid.SEG 11	54.7	14.8	11.4	5.9	5.1	3.3	1.9	1.5	1		69.5	80.9
68	" " SEG 7 + 10	63.4	10	7.2	6	3.4	3.3	2.6	1.9	1.6		73.4	80.6
69	" " SEG 9	63.1	7.7	6.8	5.6	4.7	4.2	3.5	2.3	1.7		70.8	77.6
70	" " SEG 6 + 12	54.1	11.5	9.1	7.1	6.1	4.5	3.6	2.1	1.4		65.6	74.7
71	" " SEG 5 - 2/8	73.3	7.3	5.6	4.5	2.9	2.5	1.7	1.2	0.6		80.6	86.2
72	" " SEG 5 - 1/1-2	72.1	9.8	8.1	5.9	2.9	0.7	0.1				81.9	90
73	R.Resid.SEG 11	70.7	17	6.7	2.9	1.9	0.5					87.7	94.4
74	Sl.Resid.SEG 11	44.4	17.3	14.8	9	5.9	4.4	2.7	1			61.7	76.5
75	R.Resid.SEG 7 + 10	73.4	10.3	5.2	4.4	2.1	1.5	1.3	0.9	0.4		83.7	88.9
76	Sl.Resid.SEG 7 + 10	59.5	13	7.9	5.9	4.3	3.1	2.4	1.8	1.6		72.5	80.4
77	R.Resid.SEG 9	69.8	7.8	5	4.6	3.5	3	2.6	2.1	1.1		77.6	82.6
78	Sl.Resid.SEG 9	51.5	13.7	10.6	8.7	5	4.1	2.4	2.1	1.3		65.2	75.8
79	R.Resid.SEG 6 + 12	69.2	9.8	7	6.5	2.7	2.5	1.1	0.6	0.1		79	86
80	Sl.Resid.SEG 6 + 12	45	15.4	13.2	8.4	6.3	5.4	3.5	1.6	0.7		60.4	73.6
81	R.Resid.SEG5-2/8	80.5	5.4	4.6	3.1	2.7	1.5	1.5	0.2	0.1		85.9	90.5
82	Sl.Resid.SEG 5-2/8	69.5	11.2	7.6	6.4	2.9	1.6	0.3	0.2			80.7	88.3
83	R.Resid.SEG5-1/1-2	74.2	13	10.1	2.2	0.3						87.2	97.3
84	Sl.Resid.SEG5-1/1-2	80.6	18.2	1.1								98.8	99.9
85	R.Res.dissat.W.R	63.3	10	7.3	5.8	4.4	3.5	2.5	1.9	0.9		73.3	80.6
86	R.Res.satis.W. R	73.3	6	5.3	4.4	2.9	2.7	1.8	1.7	1.6		79.3	84.6
87	Sl.Res.dissat.W.S	56.9	11.7	9.5	6.1	4.9	3.8	3	1.9	1.7		68.6	78.1
88	Sl.Res.satis.W.S	52.1	13	8.4	6.3	5.8	4.7	3.5	3.1	2.6		65.1	73.5

Table 3.3.2.5 First Score Matrix Roots for Programmes MDPREF 89 to MDPREF 110

Col.1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	13.
MDPREF PROG NUMBER	SUB-GROUP	R O O T S (% OF TOTAL VARIANCE)										1+2(%)	1+2+3(%)
89	R.Res.find R pleasing	70.7	7.4	4.9	4.7	3.6	2.9	2.3	1.9	1.1		78.1	83
90	R.Res.find R unpleasing	72.5	6.2	4.6	4.5	3.8	3	2.3	1.8	0.9		78.7	83.3
91	Sl.Res.find Sl. pleasing	58.4	13	8.7	7.3	4.4	2.8	2	1.7	1.2		71.4	80.1
92	Sl.Res.find Sl. unpleasing	49.9	12	10.1	7.1	5.4	4.8	3.9	3.7	2.5		61.9	72
93	All Res.NLVF=H.B.	37	16.4	15.2	12.8	7.8	4.4	3.9	1.9	0.1		53.4	68.6
94	" " " =V.Low	59	10.9	8.2	5.9	5.1	3.8	2.9	2	1.7		69.9	78.1
95	" " " =Low	60.5	11.3	7.7	6.3	4.6	3.6	3.2	1.3	1.1		71.8	79.5
96	" " " =Med	68.2	7.1	6	4.7	4.2	3	2.3	2.2	1.9		75.3	81.3
97	" " " =High	63.8	10.2	9.7	4.8	3.5	2.9	2.4	1.4	0.8		74	83.7
98	" " " =VHigh	63.2	8.7	7.2	5.8	4	3.5	2.9	2.3	1.9		72.9	80.1
99	R.Res.NLVF=H.B.	54.5	24.8	11.8	7.3	1.5						79.3	91.1
100	" " " =V.Low	62.2	12.2	6.7	5.8	4.4	3.1	1.9	1.7	1.5		74.4	81.1
101	" " " =Low	65.7	10.3	8.3	5.5	3.5	3	2	0.7	0.7		76	84.3
102	" " " =Med	78.5	5.3	5.2	3.1	2.7	1.8	1.5	1.1	0.4		83.8	89
103	" " " =High	78.6	7.9	4.7	3.9	2.2	1.2	0.6	0.3	0.2		86.5	91.2
104	" " " =VHigh	71	10.4	6.9	3.3	2.8	2.4	1.5	1	0.3		81.4	88.3
105	Sl.Res.NLVF=H.B.	28.7	20.8	14.4	11.9	11.2	6.5	3.6	2.5			49.5	63.9
106	" " " =V.Low	55	13.6	11	7.4	6.3	3.8	1.7	0.5	0.2		68.6	79.6
107	" " " =Low	57.9	13.2	8.4	7.1	5	3.4	2.7	1.1	0.7		71.1	79.5
108	" " " =Med	58.7	11.3	9.7	6.1	4.1	3.2	2.8	2.1	1.5		70	79.7
109	" " " =High	45	19.1	13.4	10.6	4.3	2.7	2.4	1.6	0.7		64.1	73.5
110	" " " =VHigh	58.8	12.4	7.3	7	4.7	3.7	2.6	1.8	1.1		71.2	78.5

Table 3.3.2.6 MDPREF Scaling Dimension One & Two Variance Totals

Variance(%)	No.of MDPREF Progs.	% of MDPREF Progs.
45 - 49.9	1	1
50 - 54.9	1	1
55 - 59.9	1	1
60 - 64.9	8	7
65 - 69.9	20	18
70 - 74.9	26	24
75 - 79.9	31	28
80 - 84.9	10	9
85 - 89.9	7	6
90 - 94.9	2	2
95 - 99.9	3	3

3.4 Analysis of the MDPREF Configurations

The method of selecting samples for MDPREF analysis is outlined in section 3.3.2.

The configuration diagrams included in this section depict:

(i) the concentration of subject vector termini (or the range of preference consensus) and the percentage proportion of the total sample it represents;
(ii) the average subject-vector and associated stimuli projections and;
(iii) any discounted extreme subject-vector termini.

3.4.1 An Investigation of the Effect of Different Towns of Residence On Preference Judgements

This inquiry examines the effect of different towns of residence on preference judgements. It attempts to identify any similarities or differences between Rotherham and Slough residents' preference judgements.

This investigation refers to programmes:
MDPREF 1. - One hundred Rotherham and Slough residents (figure 3.4.1.1)
MDPREF 2. - One hundred Rotherham residents (figure 3.4.1.2)
MDPREF 3. - One hundred Slough residents (figure 3.4.1.3)

3.4.1.1 <u>A Comparison of Results: a Mixed Rotherham and Slough residents group with separate Rotherham and Slough residents groups.</u>

Two dimensional MDPREF scaling is adequate for all three respondent groups.

The overall subject-vector termini preference range varies across the three groups as does the preference consensus range, see table 3.4.1.

The Rotherham and Slough (mixed residents) group has the most varied preference consensus range. The proportion of the total subjects represented by the three groups preference consensus ranges is high (83% - 97%).

The overall subject-vector termini preference range varies between the two groups. Slough residents demonstrate a much greater variation in overall preference judgements than Rotherham residents.

The extent of the preference consensus range varies. Slough residents have the largest range demonstrating more varied preferences. In both Rotherham and Slough groups, a similar proportion of the total subjects (83% and 87%) is represented by the subject consensus range.

The average subject-vector stimuli projections for the mixed Rotherham and Slough residents group are almost identical in order, to those of the Rotherham residents group average subject-vector; only the positions of stimulus points 9 and 2 differ (see figure 3.4.1.4). When these average subject vectors are compared with the Slough residents average vector, variations in stimuli projection order occur between stimulus points 9 and 2, and between points 8 and 7.

Three stimuli clusters are common to all three groupings of subjects but are most distinct along the Rotherham residents' average subject-vector. The first cluster occurs between the least preferred stimulus points 10, 8 and 7; the second between the middle order preference stimulus points 6, 2, 9 and 1; and the third between the most preferred stimulus points 3, 5 and 4.

3.4.1.2 Investigation Results Summary

(i) The data variance accounted for by dimension one is low for the Slough residents group (56%).

(ii) Slough residents demonstrate a greater variation in overall preference judgements than Rotherham residents.

(iii) Slough residents have the most varied preference consensus and the proportion of the total subjects represented by the three groups preference consensus range is high.

(iv) Rotherham and Slough residents average subject-vectors stimuli projections order are very similar.

(v) The same three stimuli clusters occur along the Rotherham and Slough residents average subject-vectors. The clusters are between stimulus points 10, 8 and 7, points 6, 2, 9 and 1, and points 3, 5 and 4.

(vi) The results of this investigation reveal that despite similarities in average vector stimuli projection orders, the preference judgements of Rotherham and Slough residents do differ; the Slough residents group demonstrates more varied preference judgements that the Rotherham residents group.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes (measured as degrees of a circle)	Overall pref. range <u>excluding</u> vector extremes (measured as degrees of a circle)	Preference consensus range (A)	% of group repre-sented by A
4	Rotherham/Slough male respondents	71	224	224	73	88
5	Rotherham/Slough female respondents	67	262	262	90	88

Table 3.4.2.1 MDPREF Summary of Rotherham and Slough all male and Rotherham and Slough all female groups

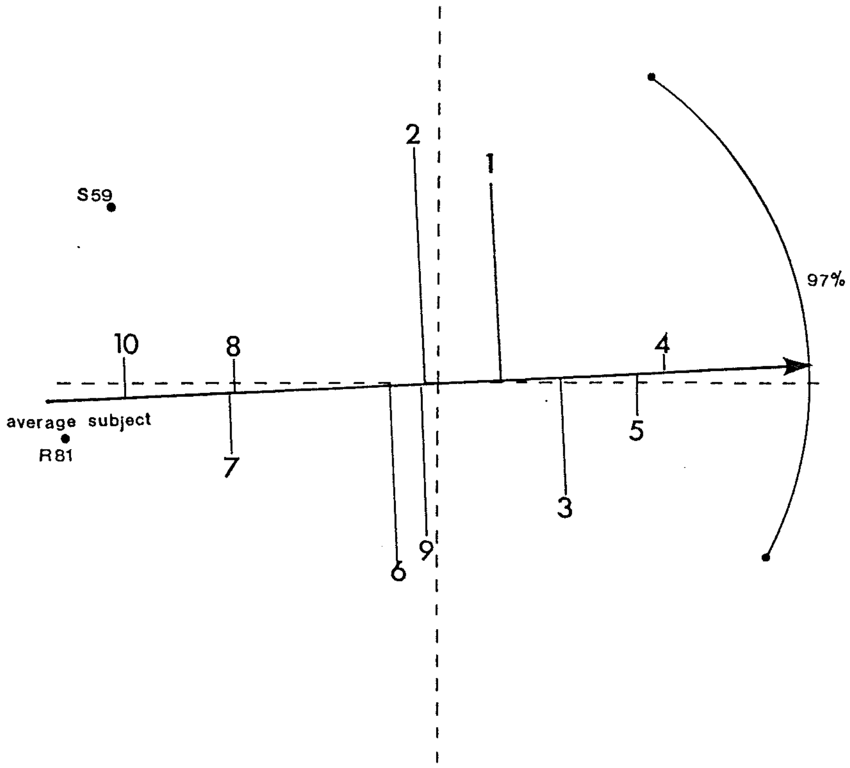


Fig.3.4.1.1 MDPREF 1 Configuration: One Hundred Rotherham and Slough Respondents

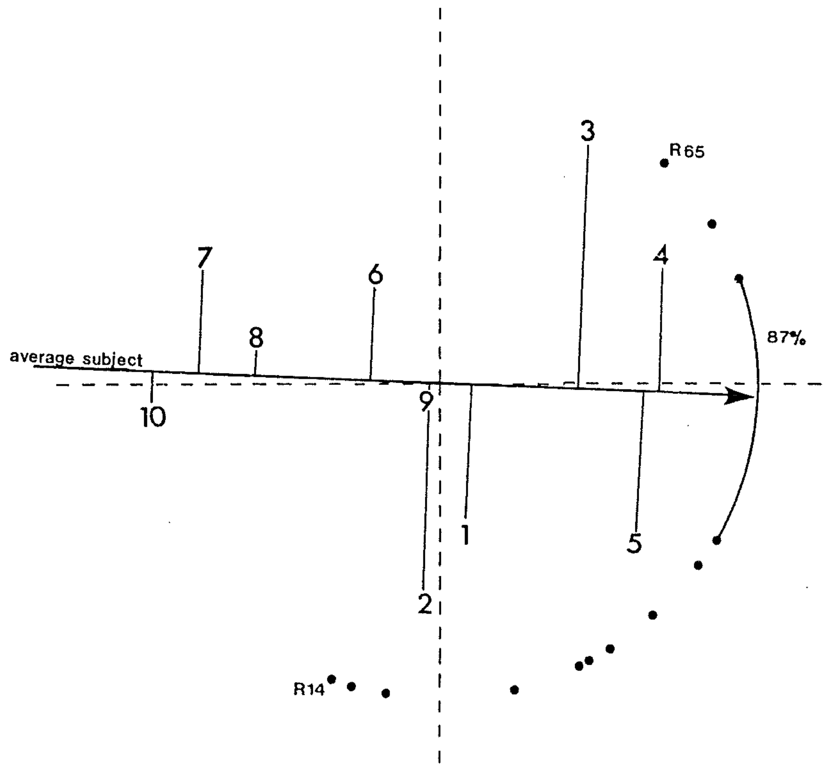


Fig.3.4.1.2 MDPREF 2 Configuration: One Hundred Rotherham Residents

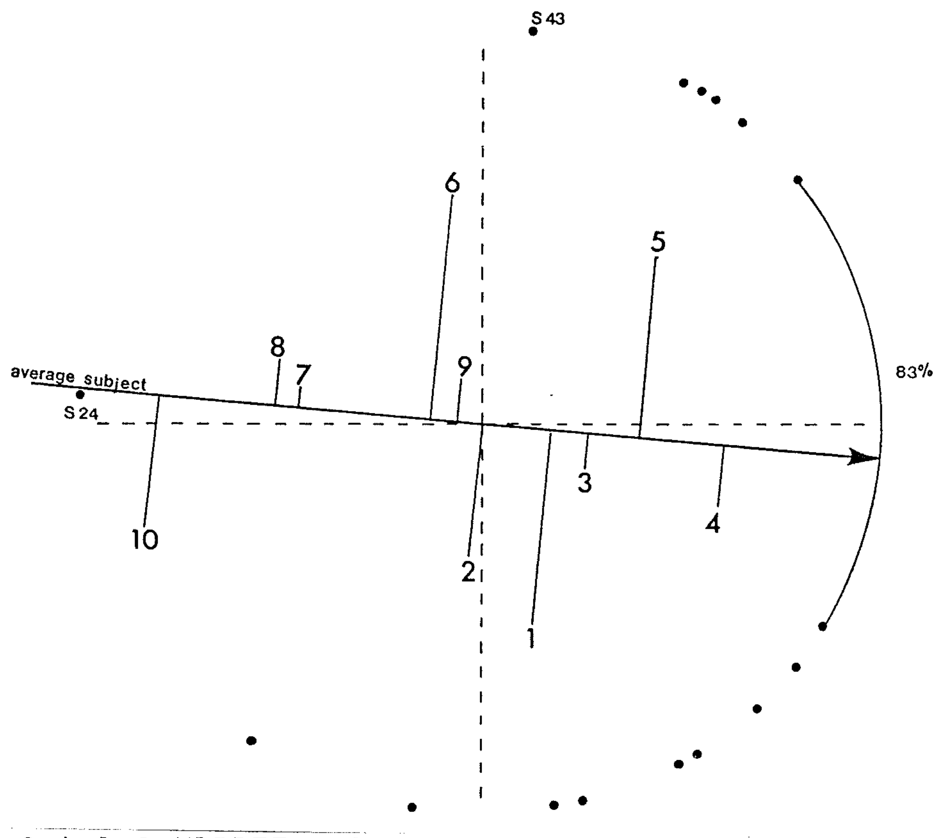


Fig.3.4.1.3 MDPREF 3 Configuration: One Hundred Slough Residents

Figure 3.4.1.4 Town of Residence Effect

MDPREF NO.	Respondent Group	Stimuli Projections (preference direction ⟶)
1	100 Rotherham & Slough residents	10 8 7 6 2 9 1 3 5 4
2	100 Rotherham residents	10 7 8 6 9 2 1 3 5 4
3	100 Slough residents	10 8 7 6 9 2 1 3 5 4

3.4.2 An Investigation of the Effect of Sex and Town of Residence on Preference Judgements

In this section the influence of respondent sex on preference judgements is examined together with the extent and nature of differences between Rotherham and Slough males and Rotherham and Slough females.

This investigation refers to programmes:

MDPREF 4. - eighty Rotherham and Slough male residents (figure 3.4.2.1)

MDPREF 5. - eighty Rotherham and Slough female residents (figure 3.4.2.2)

MDPREF 6. - all Rotherham males (figure 3.4.2.3)

MDPREF 7. - all Rotherham females (figure 3.4.2.4)

MDPREF 8. - all Slough males (figure 3.4.2.5)

MDPREF 9. - all Slough females (figure 3.4.2.6)

3.4.2.1 A Comparison of Results: a Rotherham and Slough all Male group with a Rotherham and Slough all Female group

Two dimensional MDPREF scaling is adequate to describe both groups (see table 3.4.2.1).

The overall subject-vector termini preference range is greater for the all female group than for the all male.

Similarly the all female group demonstrates the most varied preference consensus range. In both groups, a very high proportion of the total subjects (88%) is represented by the preference consensus range.

The average subject-vector stimuli projections orders are similar for both groups (see figure 3.4.2.7). The main variation occurs in the middle preference range order between stimulus points 6, 9 and 2. Three stimuli clusters appear along each average subject-vector between the least preferred stimuli, points 10, 7 and 8; the middle preference range stimulus points 6, 9, 2 and 1; and the most preferred stimulus points 3, 5 and 4. Along both average vectors least preferred stimuli cluster, points 7 and 8 lie very close to one another.

3.4.2.2 A Comparison of Results: a Rotherham all male group with a Rotherham all female group

Two dimensionsal MDPREF scaling accounts for over 76% of the total data variance for both groups (see table 3.4.2.2).

The overall subject-vector preference range is very similar for the two groups and remains very similar when the extreme subject vectors are discounted. The discounted extreme subject-vectors are R14 and R17 in the Rotherham male group and R81, R82 and R113 in the Rotherham female group.

The extent of the range covered by the concentration of subject-vector termini is similar for both groups as is the proportion of subjects represented by the preference consensus range, see table 3.4.2.2.

The order of the stimuli projections along the groups' average subject-vectors is very similar (see figure 3.4.2.7). The main variation occurs in the middle preference range order between stimulus points 9 and 6. The same three stimuli clusters, observed in earlier investigations, appear along the groups' average subject-vectors.

3.4.2.3 A Comparison of Results: a Slough all male group with a Slough all female group

Two dimensional MDPREF scaling is adequate for the two groups although accounts for less than 70% of the total data variance. Dimension one represents only 56% and 53% of the total variance respectively, for the Slough male and female groups (see Table 3.3.2.1)

Before the subject vector extremes are discounted, the overall subject-vector termini preference range varies considerably between the two groups but once discounted, the variation is more limited, see table 3.4.2.2.

With and without extreme subject vectors, Slough females demonstrate the greatest variation in preference judgements. The subject-vector stimuli discounted are S31 and S105 in the Slough male group and S24 and S7 in the female group.

The Slough female group demonstrates a more varied preference consensus than the Slough male group. In each group, a large proportion of the total subjects (82% - 87%), is represented by the preference consensus range.

The groups' average subject vector stimuli projection orders are very similar (see figure 3.4.2.7). The main variation occurs in the middle preference range order between stimulus points 2 and 9. The three stimuli clusters observed in previous investigations appear along the groups' average subject-vectors although the most preferred clusters are less distinct. The two clusters' adjacent stimulus points 1 and 3, are quite close on both average subject-vectors.

3.4.2.4 A Comparison of Results: a Rotherham all male group with a Slough all male group

The Rotherham male group's preferences are better represented in two dimensions (78% of the total data variance) than those of the Slough male group (67%), see

Table 3.4.2.2.

The overall subject-vector termini preference range varies between the two male groups especially when the extreme subject-vectors are discounted. Slough males demonstrate a much greater variation in overall preference judgements (175°) than Rotherham males (100°).

Variations are also considerable between the male groups vector termini concentration ranges. Again, Slough males demonstrate a more varied preference consensus (70°) than Rotherham males (41°). In both cases, the proportion of the total subjects represented by the consensus is high (82% - 86%).

The orders of the stimuli projections along the groups' average subject-vectors are similar, but variations occur between stimulus points 9 and 2, and points 7 and 8 (see figure 3.4.2.7). The same stimuli clusters are found along both average vectors, though less distinct on the Slough males average subject-vector.

3.4.2.5 A Comparison of Results: a Rotherham all female group with a Slough all female group

The Rotherham female group's preferences are better represented in two dimensions (76% of the total data variance) than those of the Slough female group (65%), see Table 3.4.2.2.

The overall subject-vector termini preference range varies between the two female groups especially when the extreme subject-vectors are discounted. Slough females demonstrate a much greater variation in overall preference judgements (190^{o}) than Rotherham females (105^{o}).

Considerable variations are also observed in the groups' preference consensus ranges. The Slough female group demonstrates a much greater variation among it s consensus of preference judgements (110^{o}) than Rotherham females (47^{o}). In both groups, the proportion of the total subjects represented by the consensus is high (83% - 87%).

The orders of the stimuli projections along the groups' average subject-vectors are similar but variations occur between stimulus points 9 and 2, and points 7 and 8 (see figure 3.4.2.7). The same stimuli clusters are found along both average vectors, though less distinct on the Slough females average subject-vector.

3.4.2.6 Investigation Results Summary

(i) In the Slough male and female groups, the proportion of the total data variance represented by dimension one is considerably less than it is in the Rotherham male and female groups. Dimension one accounts for 56% and 53% of the variance in the Slough male and female groups.

(ii) Of the four groups analysed, Slough females demonstrate the greatest variation in overall preference judgements, then Slough males, then Rotherham females followed by Rotherham males who have the least varied overall preference judgements.

(iii) Of the four groups analysed, Slough females have the most varied preference consensus, then Slough males with a slightly less varied consensus, then Rotherham females and finally Rotherham males who have the least varied preference judgement consensus.

(iv) The orders of the stimuli projections along the four groups' average subject-vectors are very similar.

(v) The same three stimuli clusters observed in the preceding investigation, occur along all four average subject vectors. The most-preferred stimuli clusters are less distinct along the Slough male and Slough female groups' average vectors.

(vi) This investigation reveals that respondent sex and town of residence does affect preference judgements.

Female groups exhibit more varied preference judgements than male groups, and Slough male and female groups exhibit more varied preference judgements than Rotherham male and female groups.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
4	Rotherham/Slough male respondents	71	224	224	73	88
5	Rotherham/Slough female respondents	67	262	262	90	88

Table 3.4.2.1 MDPREF Summary of Rotherham and Slough all male and Rotherham and Slough all female groups

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes	Overall pref. range excluding vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
6	Rotherham all males	78	186	100	41	86
7	Rotherham all females	76	188	105	47	84
8	Slough all males	67	215	175	70	83
9	Slough all females	65	320	190	110	87

Table 3.4.2.2 MDPREF Summary of Rotherham and Slough All Male and All Female Respondent Groups

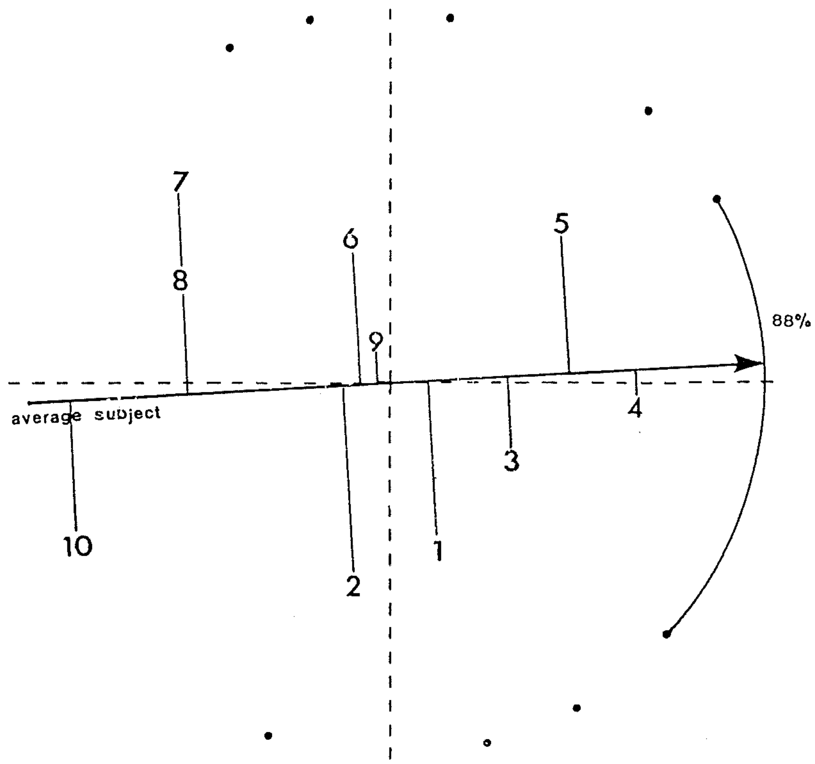


Fig.3.4.2.1 MDPREF 4 Configuration: Eighty Rotherham and Slough Males

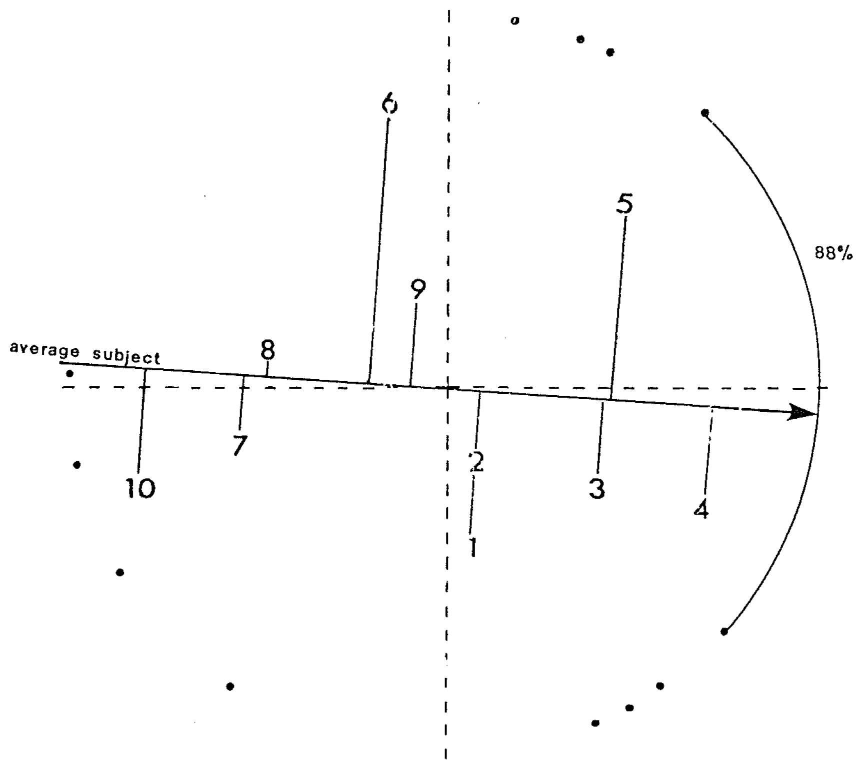


Fig.3.4.2.2 MDPREF5Configuration: Eighty Rotherham and Slough Females

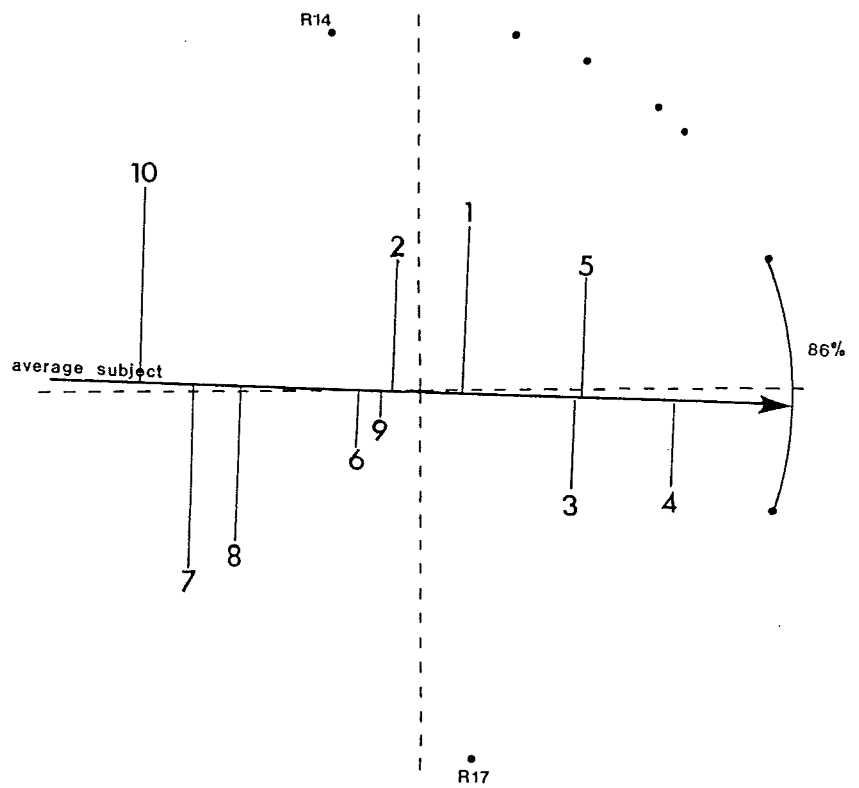


Fig.3.4.2.3 MDPREF 6 Configuration: All Rotherham Males

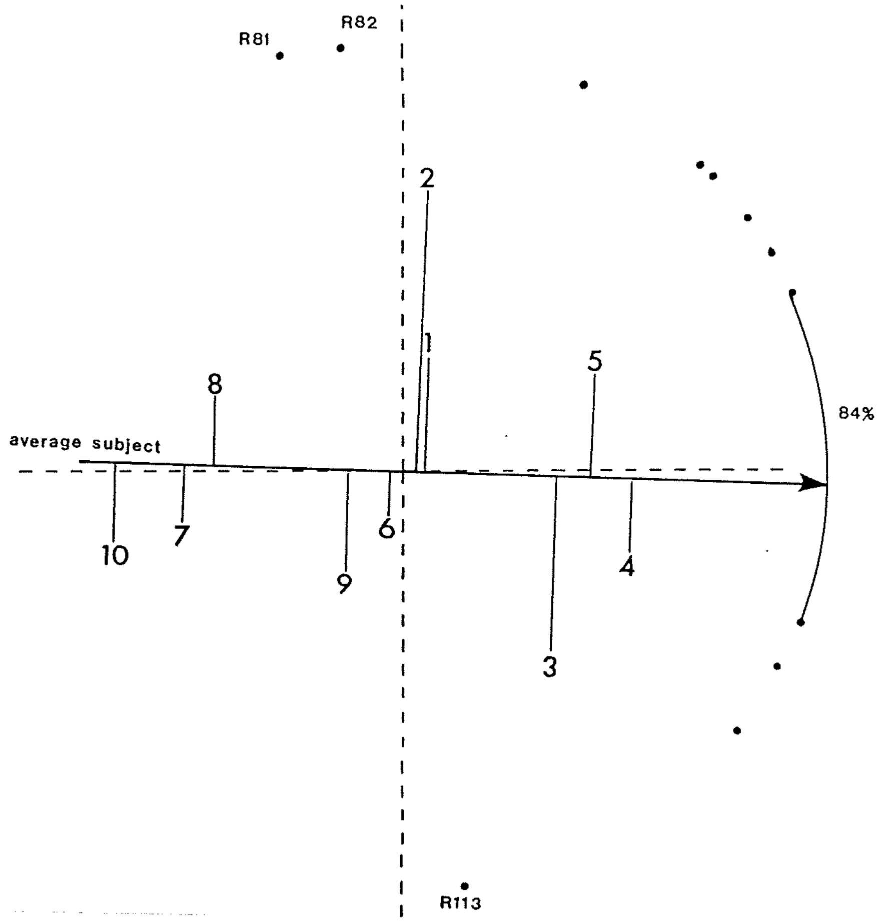


Fig.3.4.2.4 MDPREF 7 Configuration: All Rotherham Females

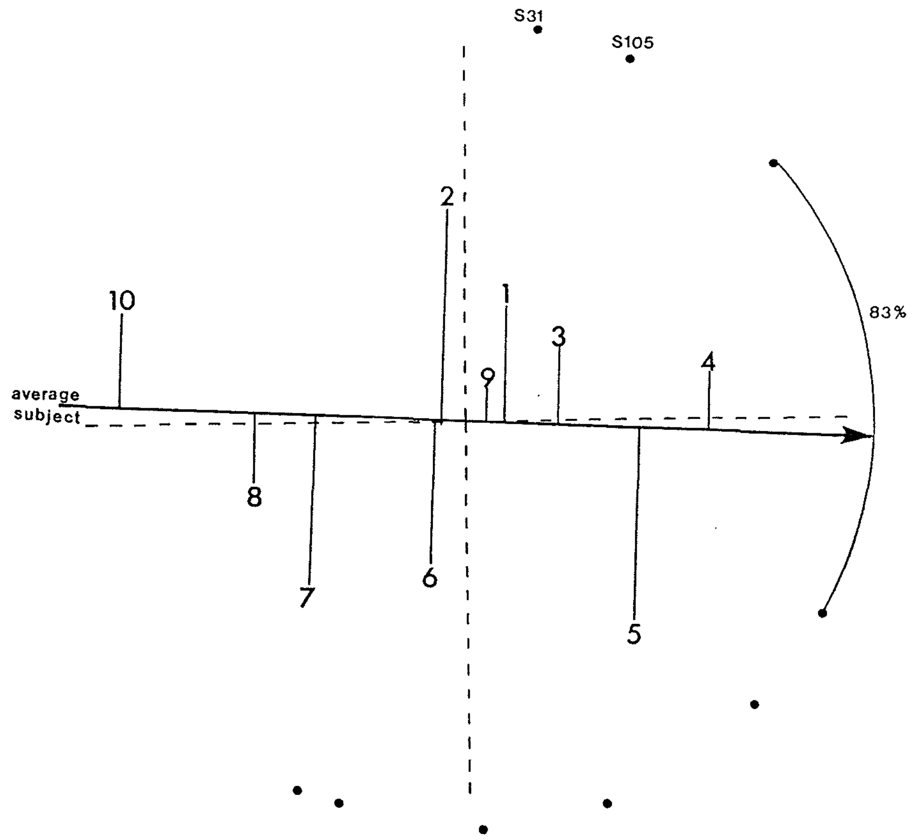


Fig.3.4.2.5 MDPREF 8 Configuration: All Slough Males

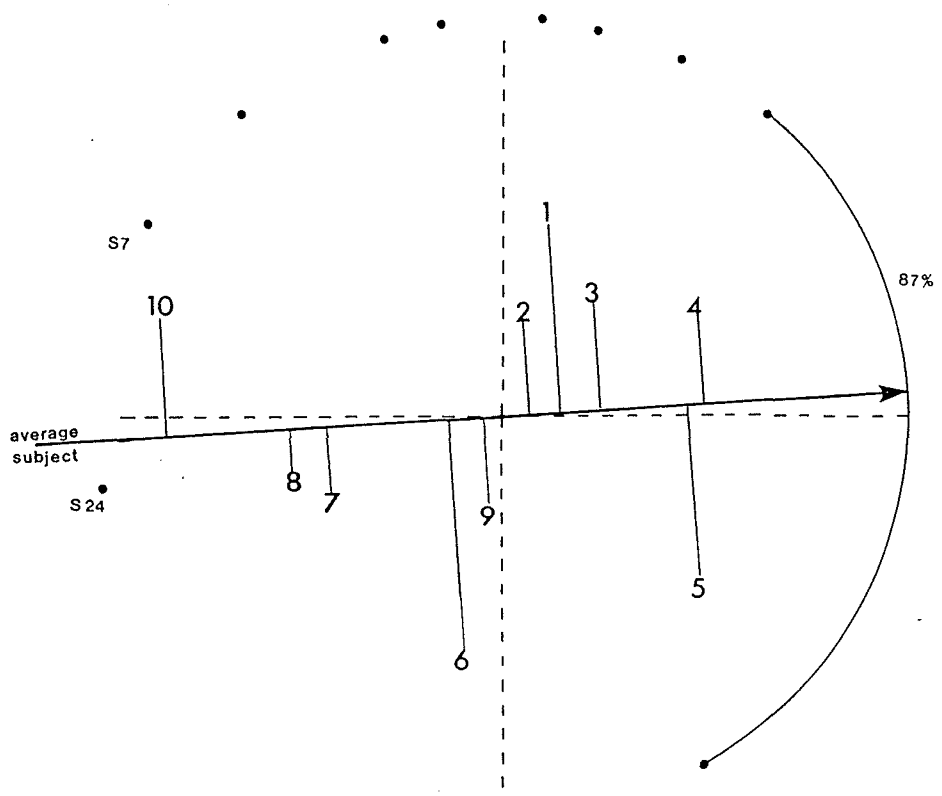


Fig.3.4.2.6 MDPREF9 Configuration: All Slough Females

Figure 3.4.2.7 Sex and Town of Residence Effects

MDPREF NO.	Respondent Group	Stimuli Projections (preference direction ⟶)
4	80 Rotherham & Slough males	10 7 8 269 1 3 5 4
5	80 Rotherham & Slough females	10 7 8 6 9 2 1 3 5 4
6	Rotherham males	10 7 8 6 9 2 1 3 5 4
7	Rotherham females	10 7 8 9 6 2 1 3 5 4
8	Slough males	10 8 7 2 6 91 3 5 4
9	Slough females	10 8 7 6 9 2 1 3 5 4

3.4.3 An Investigation of the Effect of Age on Preference Judgements

MDPREF scaling was performed on four age groups, residents aged 16-30 years, 31-50 years, 51-65 years and 66-81 years in order to identify any similarities or differences between different age groups' preference judgements.

This investigation refers to programmes:

MDPREF 10. - residents aged 16-30 years (figure 3.4.3.1)

MDPREF 11. - residents aged 31-50 years (figure 3.4.3.2)

MDPREF 12. - residents aged 51-65 years (figure 3.4.3.3)

MDPREF 13. - residents aged 66-81 years (figure 3.4.3.4)

3.4.3.1 A Comparison of Results: all four residents age groups

Two dimensional MDPREF scaling adequately describes all groups. However in the 16-30 years age group, the total data variance accounted for by dimension one is only 54% compared with scores exceeding 60% in all the other age groups (see Table 3.3.2.1).

Before the subject sector extremes are discounted the overall preference range varies considerably across the four groups (see table 3.4.3.1).

The youngest age group, (16-30 years) demonstrate the greatest variation in overall preference judgements and remains the most varied after extreme subject vectors are discounted. The extremes discounted are:
S19, R82, S120 and S117 in the 16-30 age group; S110 and S26 in the 31-50 years age group; R81 in the 51-65 years age group; and R24 and R14 in the eldest age group.

The extent of the range covered by a concentration of subject-vector termini varies, but not to any great extent. Residents aged 51-65 years have the most varied preference consensus and residents aged 16-30 years the least varied. The proportion of the total subjects represented by the groups' consensus ranges vary from 71% for residents aged 51-65 years, to 92% for residents aged 16-30 years.

The order of the stimuli projections along the three eldest group's average subject-vectors is very similar (see figure 3.4.3.5) It is identical for the two eldest groups (respondents aged 51-65 years and 66-81 years). Variations in the 31-50 years residents average vector occur in the middle preference range order. The youngest age group's average subject vector stimuli projection order differs the most, in the middle and most-preferred preferences. The same three stimuli clusters observed in earlier investigations appear along each group's average subject-vector. Within the least preferred cluster, stimulus points 7 and 8 are very close together along all average subject-vectors except the one for age group 31-50 years.

3.4.3.2 <u>Investigation Results Summary</u>

(i) The data variance represented by dimension one is low (54%) for the youngest residents age group (16-30 years).

(ii) The youngest residents age group demonstrate the greatest variation in overall preference judgements and the eldest resident age group the smallest variation.

(iii) Residents aged 51-65 years have the most varied preference consensus and the youngest age group has the least varied.

(iv) Average subjects stimuli projection orders are similar for all but the youngest age group.

(v) The same three stimuli clusters exist along all four average subject vectors.

(vi) This investigation reveals that younger residents have a tendency to exhibit more varied overall preference judgements. However, the preference judgement ranges of the four different residents age groups do not vary by any great extent; the difference between the least and most varied overall preference ranges is 19^{o}.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes (measured as degrees of a circle)	Overall pref. range <u>excluding</u> vector extremes (measured as degrees of a circle)	Preference consensus range (A)	% of group repre- sented by A
10	All respondents aged 16-30 yrs	65	294	149	60	71
11	All respondents aged 31-50 yrs	71	222	136	62	79
12	All respondents aged 51-65 yrs	72	170	146	72	92
13	All respondents aged 66-81 yrs	74	209	130	65	87

Table 3.4.3.1 MDPREF Summary of respondent age groups

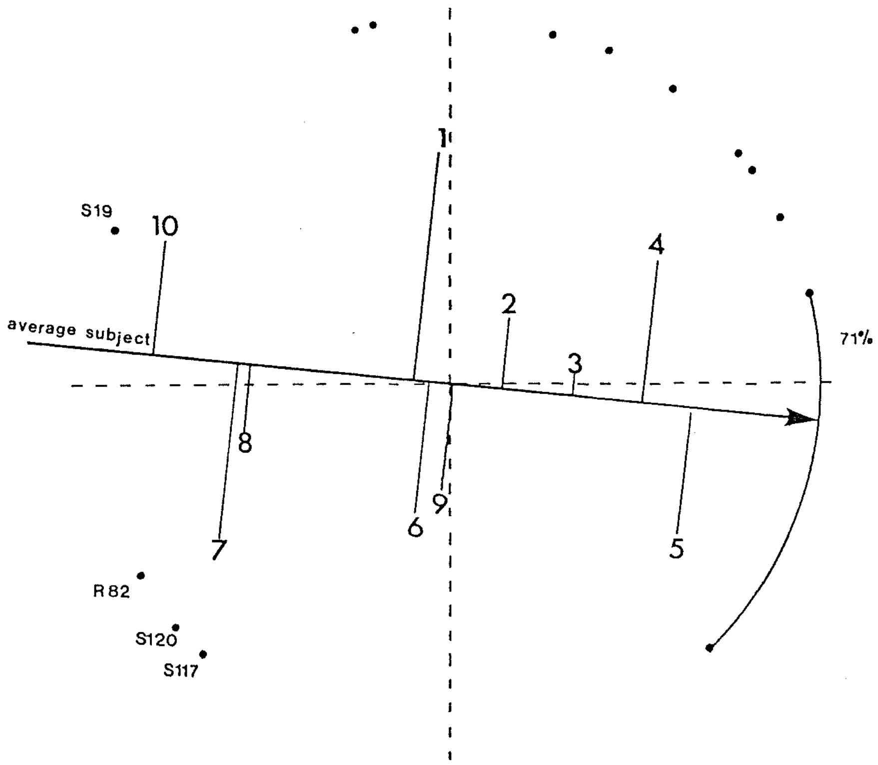


Fig.3.4.3.1 MDPREF 10 Configuration: All Residents Aged 16-30 years

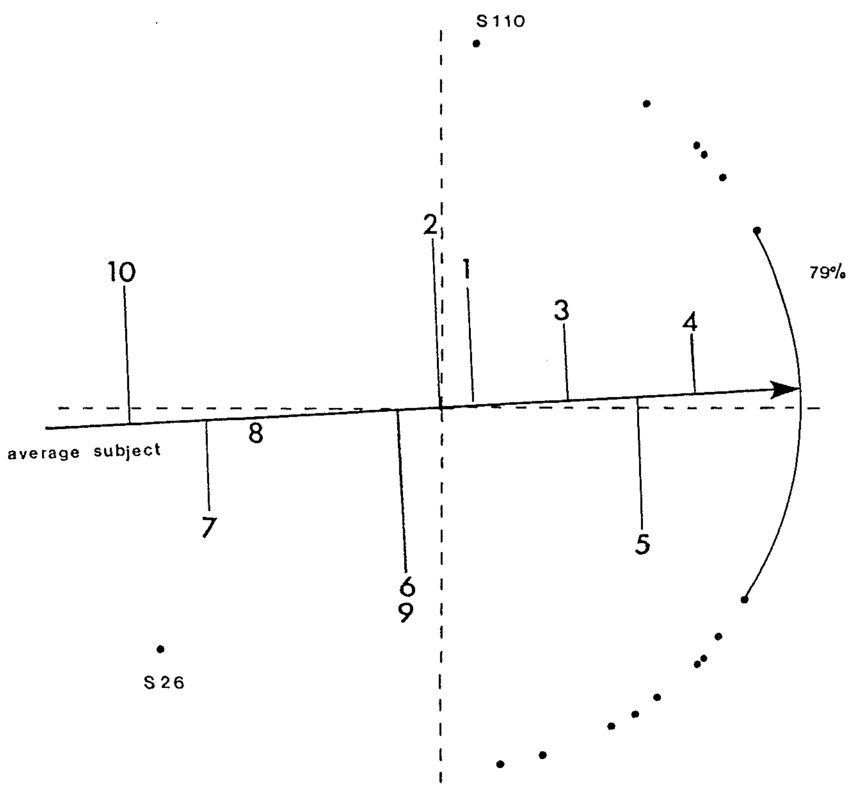


Fig.3.4.3.2 MDPREF 11 Configuration: All Residents Aged 31-50 years

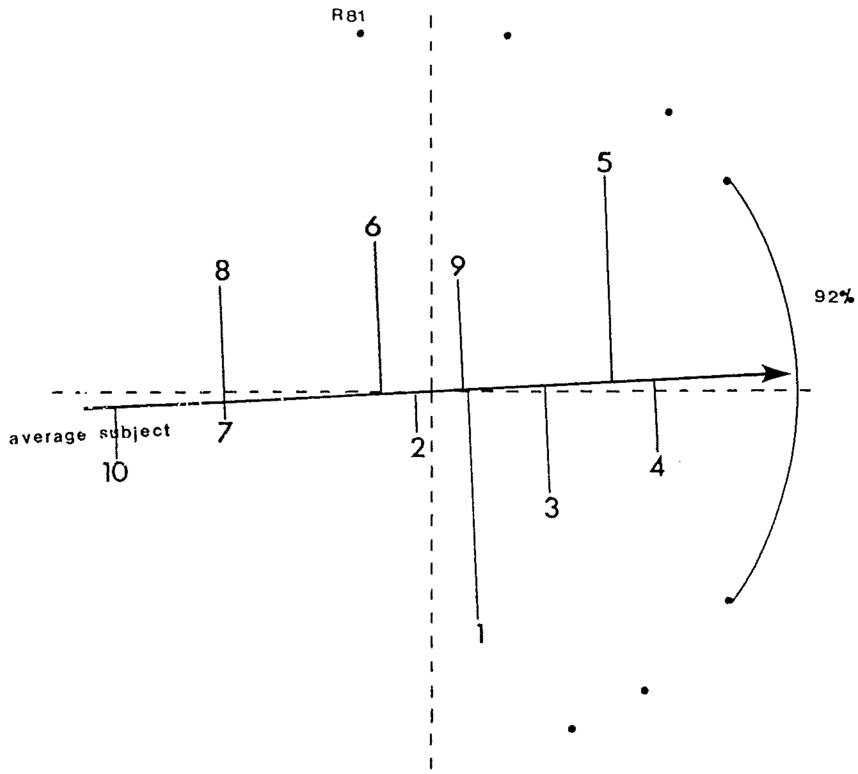


Fig.3.4.3.3 MDPREF 12 Configuration: All Residents Aged 51-65 years

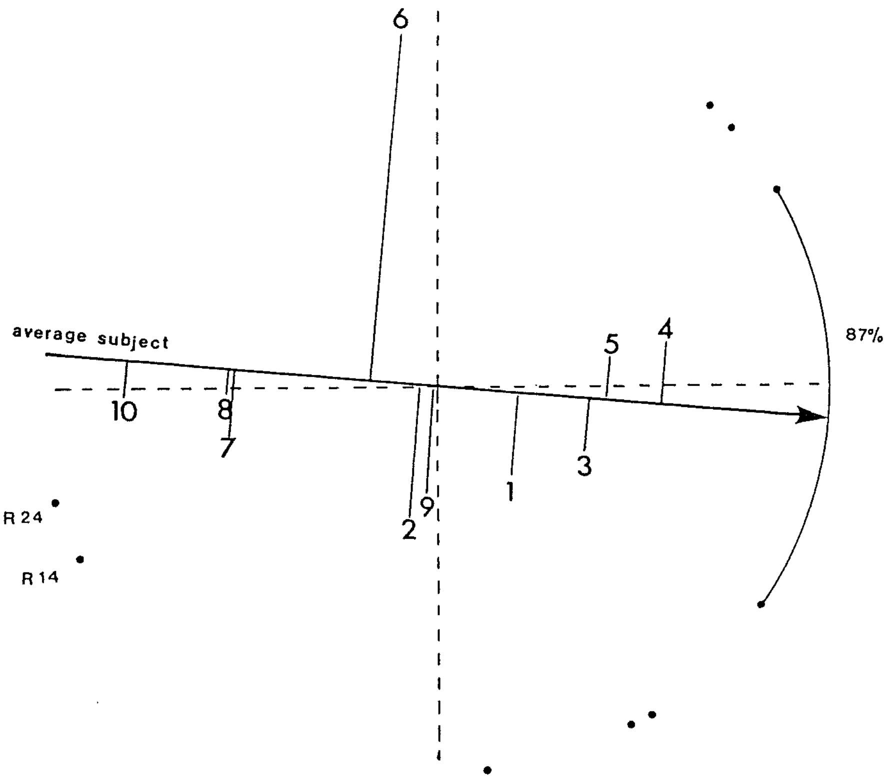


Fig.3.4.3.4 MDPREF 13 Configuration: All Residents Aged 66-81 years

Figure 3.4.3.5 Age Effect

MDPREF NO.	Respondent Group	Stimuli Projections (preference direction →)
10	Respondents aged 16-30 yrs	10 78 1 6 9 2 3 4 5
11	Respondents aged 31-50 yrs	10 7 8 6 9 2 1 3 5 4
12	Respondents aged 51-65 yrs	10 8 7 6 2 9 1 3 5 4
13	Respondents aged 66-81 yrs	10 87 6 29 1 35 4

3.4.4 An Investigation of the Effect of Age and Sex on Preference Judgements

In the preceding investigation a pattern emerges to suggest there is a relationship between resident's age and preference judgements. The purpose of this inquiry is to determine whether the pattern may be replicated in male and female residents groups. If replication is not possible, the results of the previous investigation should be examined with caution as it is likely they might be spurious results, produced by the particular respondent groupings used in that investigation's MDPREF scaling programmes.

This investigation refers to programmes:

MDPREF 14. - all males aged 16-30 years (figure 3.4.4.1)

MDPREF 15. - all females aged 16-30 years (figure 3.4.4.2)

MDPREF 16. - all males aged 31-50 years (figure 3.4.4.3)

MDPREF 17. - all females aged 31-50 years (figure 3.4.4.4)

MDPREF 18. - all males aged 51-65 years (figure 3.4.4.5)

MDPREF 19. - all females aged 51-65 years (figure 3.4.4.6)

MDPREF 20. - all males aged 66-81 years (figure 3.4.4.7)

MDPREF 21. - all females aged 66-81 years (figure 3.4.4.8)

The MDPREF programme configurations analysed are depicted in the figures specified above.

3.4.4.1 A Comparison of Results: all four male age groups

Two dimensional MDPREF scaling is adequate for all four male age groups, representing over 71% of the total data variance (see Table 3.4.4).

The overall subject-vector termini preference range varies considerably across the different male age groups especially when the extreme vectors are excluded, see table 3.4.4.

In the preceding inquiry, older age groups exhibit less variation in preference judgements than younger age groups. This tendency is not replicated in this investigation. In this instance, the eldest male age group (66-81 years) demonstrates the most variation in overall preference judgements, and a younger male age group, 31-50 years, exhibits the least variation. The discounted extreme subject vectors are: S117 and S120 in the 16-30 years male age group; and S104, R17 and R14 in respective male age groups, 31-50 years, 51-65 years and 66-81 years.

The extent of the range covered by a concentration of subject-vector termini varies quite considerably. Men aged 51-65 years demonstrate the greatest variation in preference judgements consensus and men aged 16-30 years, the least variation. However, the proportion of the groups' total subjects represented by these consensus figures varies conversely. As many as 93% of the older males (aged 51-65 years) are represented by the preference consensus range but only 42% of the youngest males (aged 16-30 years) are represented.

Similarities in stimuli projection orders exist between some average subject vectors (see figure 3.4.4.9). The stimuli orders for the two elder male age groups are very similar, the main variation occurring in the middle preference range, between stimulus points 9 and 2. Similarities also exist between the younger male age groups' stimuli projection orders, where variations also occur in the middle preference range between stimulus points 6 and 9. Stimuli clusters observed in preceding investigations occur along the groups' average subject vectors although the most preferred clusters are less distinct on the younger male groups' average vectors (male residents aged 16-30 years and 31-50 years). On both of these vectors adjacent clusters' stimulus points 1 and 3(and adjacent clusters)are very close together.

3.4.4.2 A Comparison of Results: all four female age groups

Two dimensional MDPREF scaling is adequate for the four female age groups but accounts for less than 70% of the total data variance in the two younger female groups (females aged 16-30 and 31-50 years). Dimension one represents only 55% and 58% of the total variance for the respective female age groups of 16-30 years and 31-50 years (see Table 3.3.2.1).

The overall subject vector preference range varies across the four female age groups (see Table 3.4.4). As in the preceding inquiry, younger age groups exhibit more varied preference judgements than older age groups and after the extreme subject vectors are discounted. The discounted sector extremes are S7 (in the 16-30 years age group), S26 (31-50 years), R81 (51-65 years) and S24 (66-81 years).

The extent of the range covered by the concentration of subject-vector termini varies. The two middle range age groups, 31-50 years and 51-65 years demonstrate the greatest variation in consensus of preference judgements, and the youngest and eldest age groups the least variation. The proportion of the groups' total subjects represented by the consensus is over 80% for the middle age-range groups, 68% for the eldest age group but only 41% for the youngest female age group. (see Table 3.4.4).

There is a considerable degree of similarity between the groups' average subject vectors stimuli projection orders (see figure 3.4.4.9). Throughout the four age groups, the main variations occur in the middle range preferences between stimulus points 2, 9 and 1. The three stimuli clusters previously observed, appear along each group's average subject-vector, but only in the female age group 31-50 years, are the middle and most preferred clusters distinguishable from each other. On the other three age groups' average vectors, the two clusters' adjacent stimulus points 1 and 3 lie. close together.

3.4.4.3 A Comparison of Results: all males aged 16-30 years with all females aged 16-30 years

The overall subject-vector termini preference range varies before and after the extreme vectors are excluded. Females aged 16-30 years demonstrate a greater variation in overall preference judgements (147^{o}) than males aged 16-30 years (106^{o}).

The extent of the range covered by the concentration of subject-vector termini is similar for both male (15^{o}) and female (18^{o}) groups aged 16-30 years.

The order of the stimuli projections along the groups' average subject vectors is similar, with variations between stimulus points 1 and 2 and points 10 and 7 (see figure 3.4.4.9). Three stimuli clusters are found along both average vectors and in both cases stimulus 3 is part of the middle preference cluster rather than the most preferred stimuli cluster.

3.4.4.4 A Comparison of Results: all males aged 31-50 years with all females aged 31-50 years

The overall subject-vector termini preference range varies quite considerably for the two groups before and after vector extremes are excluded. Females aged 31-50 years demonstrate a greater variation in overall preference judgements (163^{o}) than males aged 31-50 years (61^{o}).

Similar proportions of the groups' total subjects (81% and 82%) are represented by the ranges of vector termini concentration. However the extent of the ranges vary, females aged 31-50 years have a more varied preference consensus (70^{o}) than males of the same age (43^{o}).

The groups' average subject vector stimuli projection orders are very similar with only one significant variation between stimulus points 9 and 6 (see figure 3.4.4.9). The stimuli clusters observed in preceding investigations are found on both average vectors but in the male age group, stimulus 3 usually belonging to the middle preference cluster, lies within the most preferred stimuli cluster on the female age group average vector.

3.4.4.5 A Comparison of Results: all males aged 51-65 years with all females aged 51-65 years

The overall subject-vector preference range varies before and after the extreme subject-vectors are discounted. Females aged 51-65 years demonstrate a greater variation in overall preference judgements (116^{o}) than males aged 51-65 years (78^{o}).

In both groups, a high proportion of the total group's subjects is represented by the concentration of subject-vector termini (85% - 93%). The extent of the range varies the female age group demonstrate a more varied preference consensus (71^{o}) than the male age group (60^{o}).

The order of the stimuli projections along the groups' average subject-vectors are almost identical with only a slight variation between stimulus points 9 and 2 (see figure 3.4.4.9). Three stimuli clusters (observed in earlier investigations) are found along both average vectors, but on the female group's average vector it is not clear whether stimulus point 3 belongs to the middle-preference, or most preferred stimuli clusters.

3.4.4.6 A Comparison of Results: all males aged 66-81 years with all females aged 66-81 years

The overall subject-vector preference range varies before and after the subject vector extremes are discounted. Males aged 66-81 years demonstrate a greater variation in overall preference judgements (149^{o}) than females aged 66-81 years (109^{o}).

Similar proportions of the groups' total subjects (71% and 68%) are represented by the ranges of vector termini concentration. The extent of the ranges vary slightly; males aged 66-81 years possess a slightly more varied consensus of preference judgements (40^{o}) than females of that age group (32^{o}).

The orders of the stimuli projections along the groups' average subject vectors are very similar, with the only significant variations occurring between stimulus points 7 and 8, and points 9 and 2 (see figure 3.4.4.9). Three stimulus clusters (observed in earlier investigations) are found along both average vectors. It is not clear whether stimulus point 1 belongs to the middle - preference or most-preferred stimuli clusters on these average vectors.

3.4.4.7 Investigation Results Summary

(i) The data variance represented by dimension one is low for the younger female age groups; 55% for females aged 16-30 years and 58% for females aged 31-50 years.

(ii) Female age groups demonstrate greater variation in overall preference judgements than corresponding male age groups with one exception: Males aged 66-81 years.

(iii) In the preceding investigation, younger age groups exhibit more varied preference judgements than older age groups. In this inquiry only the female groups exhibit this tendency. Among the male groups, the eldest group (66-81 years) exhibits the most varied preference judgements and the younger 31-50 years age group, the least varied.

(iv) Female groups demonstrate greater variation in preference consensus than corresponding male age groups with one exception - males aged 66-81 years.

(v) In both male and female age groups, the proportion of the total subjects represented by the consensus is high (68% - 93%), with one exception, the youngest male and female age groups where the proportion is only 41% - 42%.

(vi) There is a greater similarity in the average subject vector stimuli projection order between corresponding male and female age groups, than there is across the four different age groups in either sex.

(vii) In both sexes, and across all four age groups there is a tendency for the two most preferred stimuli clusters to be less easily distinguishable than in previous investigations. The adjacent stimulus points 1 and 3 lie quite close to each other. In the youngest male and female age groups, stimulus point 3 appears with the middle-preference stimuli cluster, but in the eldest male and female age groups, stimulus point 1 appears with the most-preferred stimuli cluster.

(viii) From the results of this investigation, it is not clear whether age per se, influences preference judgements. It is however, quite apparent that the sex of the respondent plays an important role in the variation of preference judgements; female age groups exhibit more varied overall preferences and preference consensus ranges than male age groups. In the preceding investigation, a relationship between age and preference judgements is observed; younger groups demonstrate more varied preference judgements than older age groups. The relationship pattern is replicated in this investigation for only female age groups, among the male groups quite a different preference variation pattern exists.

In subsequent inquiries, respondents should be grouped according to age and town of residence. If MDPREF scaling on these groups then replicates the relationship described in this investigation it would support the assumption that age influences preference judgements. The results of any subsequent investigations using Rotherham and Slough respondent groupings should however be considered with caution. In preceding analyses it has been shown that the town of residence affects respondents' preference judgements (3.4.1 and 3.4.2), so it would be imprudent to misinterpret a combined effect of age and town of residence as the effect of a single variable, age.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes	Overall pref. range excluding vector extremes	Preference consensus range (A)	% of group repre - sented by A
			(measured as degrees of a circle)			
14	All males aged 16-30 yrs	71	210	106	15	42
16	All males aged 31-50 yrs	77	107	61	43	81
18	All males aged 51-65 yrs	77	104	78	60	93
20	All males aged 66-81 yrs	74	239	149	40	71
15	All females aged 16-30 yrs	67	203	147	18	41
17	All females aged 31-50 yrs	69	225	163	70	82
19	All females aged 51-65 yrs	72	163	116	71	85
21	All females aged 66-81 yrs	78	199	109	32	68

Table 3.4.4 MDPREF Summary of All Male and All Female Age Groups

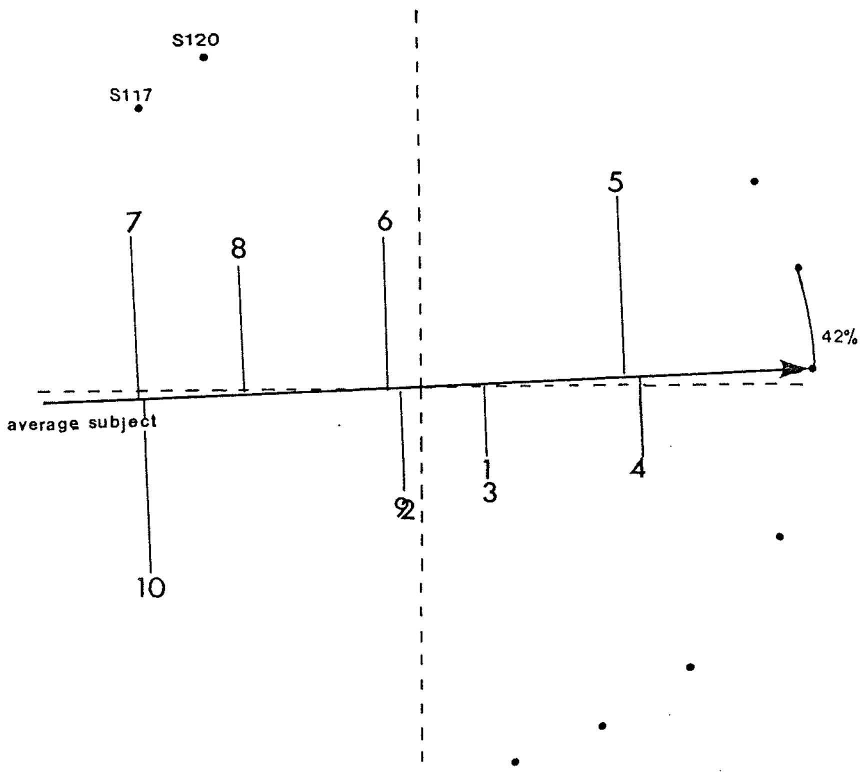


Fig.3.4.4.1 MDPREF 14 Configuration: All Respondent Males Aged 16-30 years

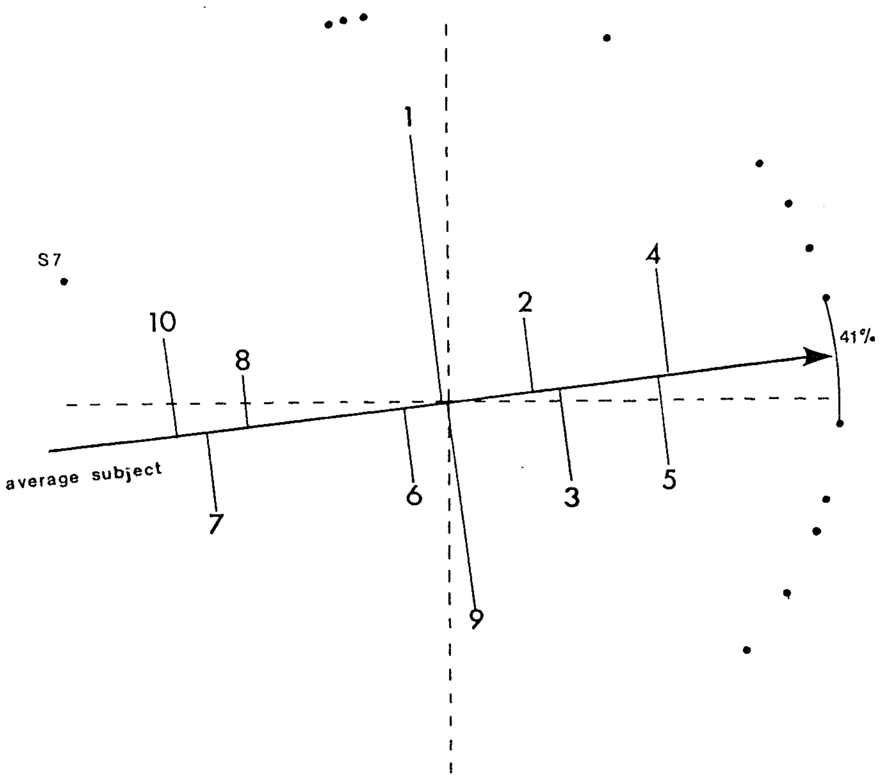


Fig.3.4.4.2 MDPREF 15 Configuration: All Respondent Females Aged 16-30 years

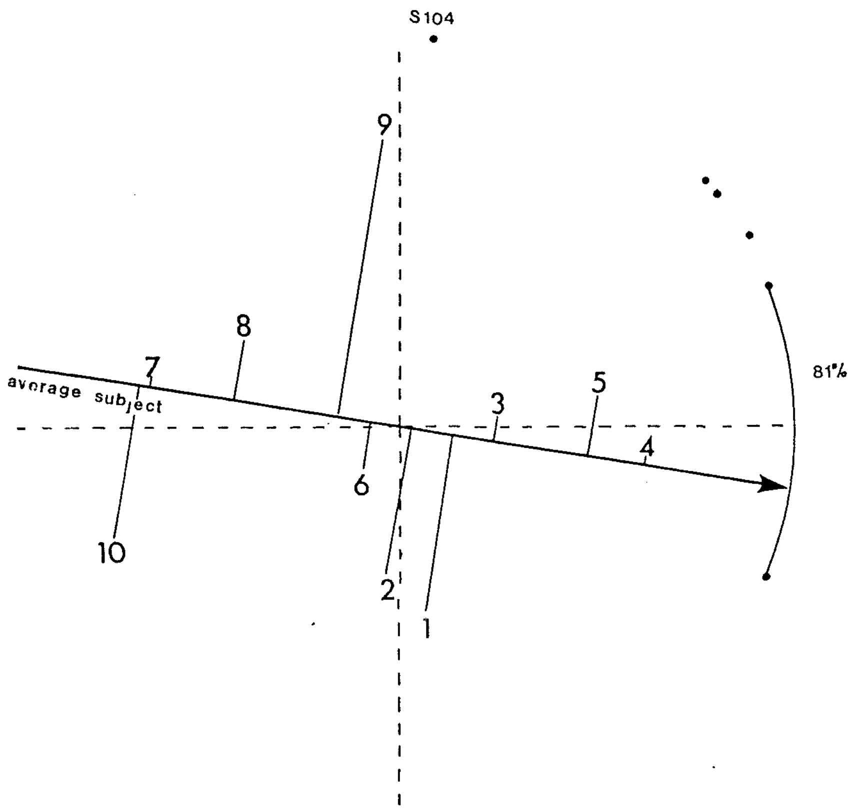


Fig.3.4.4.3 MDPREF 16 Configuration: All Respondent Males Aged 31-50 years

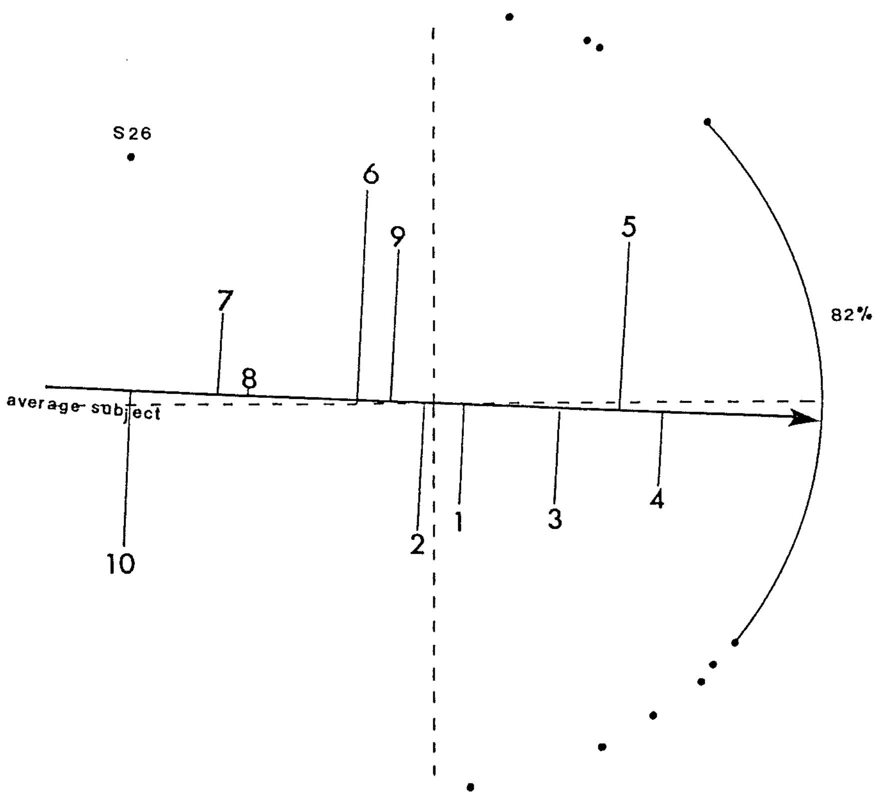


Fig.3.4.4.4 MDPREF 17 Configuration: All Respondent Females Aged 31-50 years

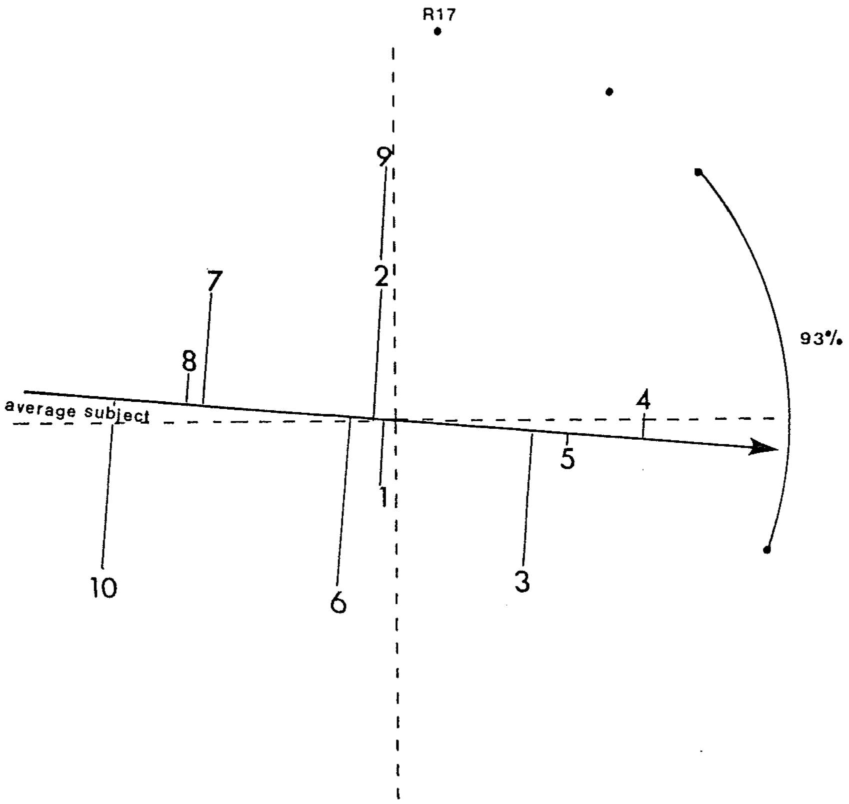


Fig.3.4.4.5 MDPREF 18 Configuration: All Respondent Males Aged 51-65 years

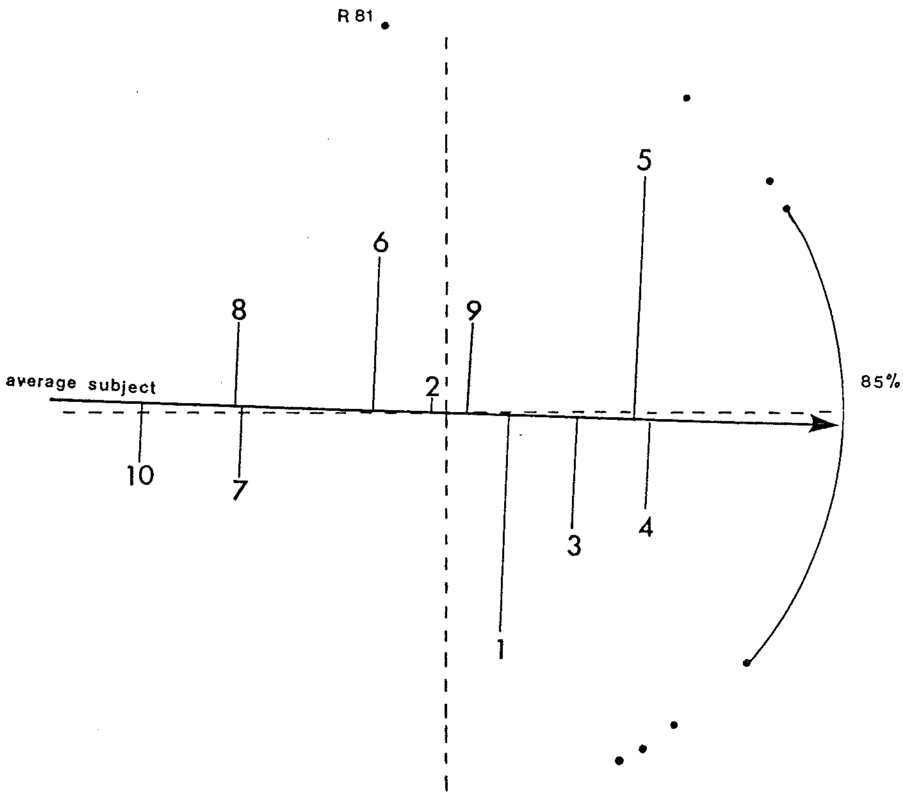


Fig.3.4.4.6 MDPREF 19 Configuration: All Respondent Females Aged 51-65 years

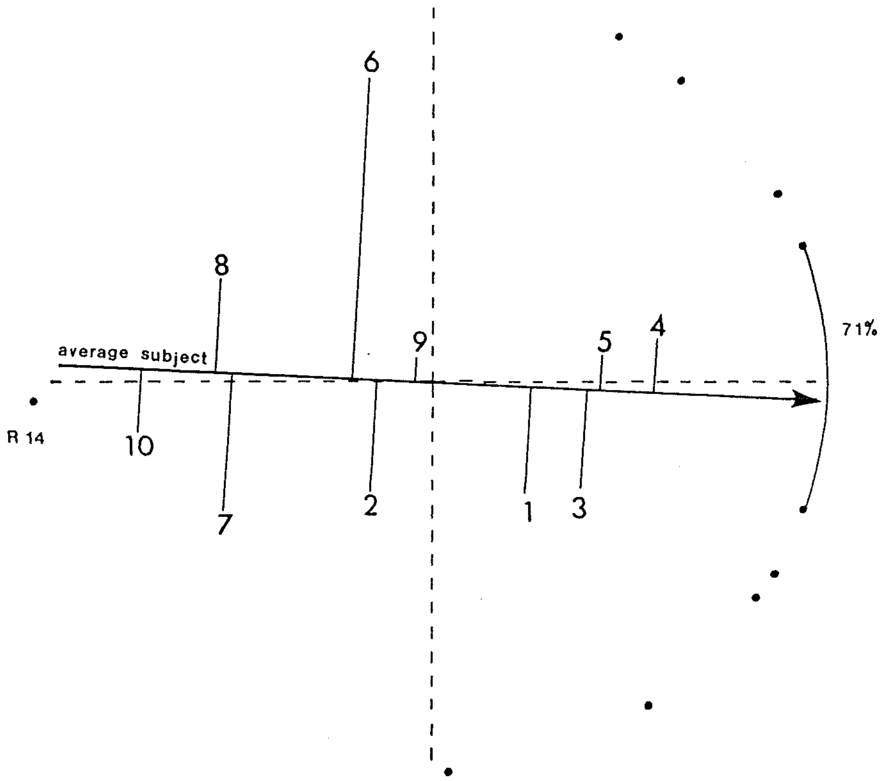


Fig.3.4.4.7 MDPREF 20 Configuration: All Respondent Males Aged 66-81 years

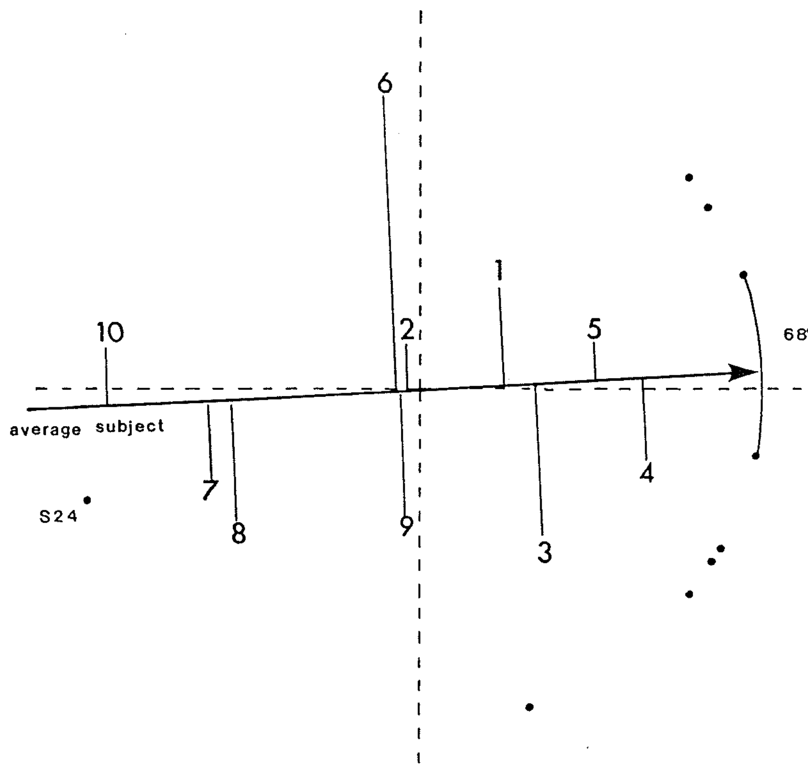


Fig.3.4.4.8 MDPREF 21 Configuration: All Respondent Females Aged 66-81 years

Figure 3.4.4.9 Age and Sex Effects

MDPREF NO.	Respondent Group	Stimuli Projections (preference direction ⟶)
14	All males 16-30 yrs	10 7 8 6 9 2 1 3 . 5 4
16	All males 31-50 yrs	10 7 8 9 6 2 1 3 5 4
18	All males 51-65 yrs	10 8 7 6 9 2 1 3 5 4
20	All males 66-81 yrs	10 8 7 6 2 9 1 3 5 4
15	All females 16-30 yrs	10 7 8 6 9 1 2 3 5 4
17	All females 31-50 yrs	10 7 8 6 9 2 1 3 5 4
19	All females 51-65 yrs	10 8 7 6 2 9 1 3 5 4
21	All females 66-81 yrs	10 7 8 6 2 9 1 3 5 4

3.4.5 An Investigation Of The Effect of Age And Different Towns of Residence On Preference Judgements

This investigation refers to programmes:

MDPREF 22. - Rotherham residents aged 16-30 years (figure 3.4.5.1)

MDPREF 23. - Slough residents aged 16-30 years (figure 3.4.5.2)

MDPREF 24. - Rotherham residents aged 31-50 years (figure 3.4.5.3)

MDPREF 25. - Slough residents aged 31-50 years (figure 3.4.5.4)

MDPREF 26. - Rotherham residents aged 51-65 years (figure 3.4.5.5)

MDPREF 27. - Slough residents aged 51-65 years (figure 3.4.5.6)

MDPREF 28. - Rotherham residents aged 66-81 years (figure 3.4.5.7)

MDPREF 29. - Slough residents aged 66-81 years (figure 3.4.5.8)

The MDPREF programmes analysed are depicted in the figures specified above.

3.4.5.1 A Comparison of Results: all Rotherham age groups

Two dimensional MDPREF scaling is adequate for all four Rotherham age groups, representing 78% to 80% of the total data variance (see Table 3.4.5). The overall subject-vector termini preference range varies before and after the extreme vectors are excluded (see Table 3.4.5).

In the preceding inquiries, older age groups exhibit less varied preference judgements than younger age groups, but this is not replicated in this investigation. In this instance the eldest Rotherham age group (66-81 years) demonstrates the most varied overall preference judgements, and the youngest Rotherham age group (16-30 years) exhibits the least varied undistorted overall preference judgements range. The discounted extreme vectors are: R82 in the youngest age group; R81 and R17 in the 51-65 years age group, and R14 in the eldest age group.

The extent of the range covered by a concentration of subject vector termini varies quite considerably. Rotherham residents aged 31-50 years demonstrate the greatest variation in preference judgement consensus and residents aged 16-30 years, the least variation. The proportion of the groups' total subjects represented by the consensus scores varies. In the youngest residents age group, this proportion is considerably smaller (59%) than it is for the older groups (78% - 90%), see Table 3.4.5.

There is a large degree of similarity between the groups' average subject-vectors stimuli projection orders (see figure 3.4.5.9). The greatest similarities exist between the three older groups. In the youngest Rotherham age group the variations occur between stimulus points 10 and 7, and points 9 and 6.

The stimuli clusters observed in earlier investigations, appear along each group's average subject vector. Also on the three older age groups' average vectors there are distinct stimuli groupings within the three clusters: in the least preferred stimuli cluster points 7 and 8 lie very close to each other; in the middle preference range stimulus points 2 and 6; and in the most preferred cluster stimulus points 3 and 5.

3.4.5.2 <u>A Comparison of Results: all Slough age groups</u>

Two dimensional MDPREF scaling represents 60% - 75% of the total data variance of the four Slough age groups, see Table 3.4.5.

The overall subject-vector termini preference range varies across the different Slough age groups before and after the vector extremes are discounted, see Table 3.4.5.

In the preceding inquiries, younger age groups exhibit more varied preference judgements than older age groups; to some extent this tendency is replicated in this investigation. The youngest Slough age group (16-30 years) demonstrates the most varied overall preference judgements, and the eldest group (66-81 years), exhibits the least varied undistorted overall preference judgements range. The discounted extreme subject vectors are: S117 and S120 in the youngest age group; S26, S110 and S35 in the 31-50 years age group, and S24 in the eldest Slough age group.

Slough residents aged 66-81 years exhibit the most varied preference judgements consensus and residents aged 51-65 the least varied. In each age group the proportion of the total subjects represented by the consensus is high, 69% - 88%, see Table 3.4.5.

There is a considerable degree of similarity between the groups' average subject-vectors stimuli projection orders (see figure 3.4.5.9). The greatest similarities exist between the older Slough age groups. Age groups 51-65 years and the 66-81 years have the most similar stimuli projection order with only one variation between stimulus points 9 and 2. The Slough residents 31-50 years age group's average vector closely resembles these groups', vectors, with an additional variation occurring between stimulus points 7 and 8. The youngest Slough age group's average vector differs the most, with variations in the order of stimulus points 1, 9, 6 and 5.

The stimuli clusters obvserved in earlier investigations are not readily apparent along the Slough age groups average vectors. The exception is the residents aged 31-50 years average vector where stimulus point 3 appears with the middle preference range cluster, instead of the most-preferred stimuli cluster. Along the other groups' average vectors, the close proximity of adjacent stimulus points 1 and 3, points 1 and 7, and points 7 and 6 make the three stimuli clusters less distinguishable.

3.4.5.3 A Comparison of Results: Rotherham residents aged 16-30 years with Slough residents aged 16-30 years

The overall subject-vector preference ranges of the two groups vary considerably both before and after the extreme subject-vectors are discounted. Slough residents aged 16-30 years demonstrate a greater variation in overall preference judgements (192^{o}) than Rotherham residents aged 16-30 years (68^{o}).

In both groups, a large proportion of the total subjects is represented by the consensus of subject preferences. (59% - 75%). However, the extent of the consensus range varies significantly, from 62^{o} for the Slough 16-30 years age group to 20^{o} for the corresponding Rotherham age group.

The order of the stimuli projections along the groups' average subject-vectors differ considerably, and there are only weak similarities between the vectors' stimuli clusters (see figure 3.4.5.9). On both average vectors stimulus points 6, 2 and 9 are more closely grouped than any other stimulus points.

3.4.5.4 A Comparison of Results: Rotherham residents aged 31-50 years with Slough residents aged 31-50 years

The overall subject-vector termini preference range varies between the two groups but is more limited after extreme subject-vectors are discounted. Slough residents aged 31-50 years demonstrate a greater variation in overall preference judgements (128°) than Rotherham residents (100°).

In both groups, a large proportion of the total subjects is represented by the consensus of subjects preferences (69% - 90%). The extent of the consensus range varies only slightly between the two groups.

The order of the stimuli projections along the groups' average vectors is very similar, the only difference occurs between stimulus points 9 and 2 (see figure 3.4.5.9). On both average vectors, stimulus points 6, 2 and 9 are more closely grouped than any other stimuli.

3.4.5.5 A Comparison of Results: Rotherham residents aged 51-65 years with Slough residents aged 51-65 years

The overall subject-vector termini preference range varies between the two groups and becomes more pronounced after the exclusion of the extreme vectors. Slough residents aged 51-65 years demonstrate a greater variation in overall preference judgements (116^{o}) than Rotherham residents (82^{o}).

In both groups a large proportion of the total subjects is represented by the consensus of subject preferences (78% - 84%). The extent of the consensus range varies. Slough residents aged 51-65 years possess a slightly more varied consensus of preference judgements (53^{o}) than the corresponding Rotherham age group (36^{o}).

The orders of the stimuli projections along the groups' average subject vectors are similar, but variations occur between stimulus points 7 and 8, and points 9 and 6 (see figure 3.4.5.9). There are few similar stimuli groupings along the average vectors, only stimulus points 9 and 2 are in close proximity on each of the average vectors.

3.4.5.6 A Comparison of Results: Rotherham residents aged 66-81 years with Slough residents aged 66-81 years

The overall subject-vector termini preference range varies quite considerably between the two groups before the subject-vector extremes are discounted. Once the extreme vectors are excluded the groups exhibit very similar overall preference ranges, (110^{o} and 111^{o}).

In both age groups, a large proportion of the total subjects is represented by the consensus of subjects preferences (79% - 88%) but the extent of the consensus range varies. Slough residents aged 66-81 years possess a more varied consensus (67^{o}) than Rotherham residents (41^{o}).

The order of the stimuli projections along the group's average vectors is similar, although variations exist between stimulus points 7 and 8, and points 6 and 2 (see figure 3.4.5.9). The three stimuli clusters observed in earlier investigations appear along the average vectors. However, on the Slough group's average vector, stimulus point 1 appears with the most preferred stimuli cluster instead of the middle preference range cluster.

3.4.5.7 Investigation Results Summary

(i) The data variance represented by dimension one is low for three of the four Slough age groups. In the youngest age group dimension one represents 46% in the 31-50 year age group it represents 53% and is the 51-65 year age group it represents 57% of the total data variance.

(ii) Slough age groups demonstrate a greater variation in overall preference judgements than corresponding Rotherham age groups with one exception. Rotherham and Slough residents aged 66-81 years possess almost identical overall preference judgement ranges.

(iii) In the preceding investigation, younger age groups exhibit more varied preference judgements than older age groups. In this inquiry this is replicated by only the Slough age groups. Among the Rotherham groups, the eldest group (66-81 years) exhibits the most varied preference judgements and the youngest 16-30 years age group, the least varied.

(iv) Slough age groups demonstrate a greater variation in preference consensus than corresponding Rotherham age groups.

(v) In both the Rotherham and Slough age groups a large proportion of the total subjects (59% - 90%) is represented by the consensus of subjects preferences.

(vi) In both towns, and across all four age groups, there is a tendency for the youngest age groups' (16-30 years) average subject vectors stimuli projection order to least resemble the stimuli order found along the older age groups' average vectors.

(vii) The stimuli projection clusters observed along average vectors in earlier investigations are only discernable along the Rotherham age groups' average vectors, and the average vector for Slough residents aged 31-50 years. On the remaining Slough age groups' average vectors, the three stimuli clusters do not exist.

(viii) The results of this investigation would indicate that age affects preference judgements but the effect is not absolute. It is however, quite apparent that the town of residence plays an important role in the variation of preference judgements; Slough residents' age groups demonstrate more varied overall preference judgements and preference consensus ranges than corresponding Rotherham age groups.

In an earlier inquiry (3.4.3) a relationship between age and preference judgements, is observed where younger age groups exhibit more varied preference judgements than older age groups. In a subsequent inquiry (3.4.4), this relationship pattern is replicated by only female age groups; male groups demonstrate a quite different variation in preference judgements. Similarly in this investigation the 'age effect' is observed in only one data set, that pertaining to Slough (only) age groups. In the Rotherham age groups' preference judgements, quite a different variation pattern is observed. It is therefore concluded that age does influence resident groups' preference judgements, but the town of residence and respondent sex have a much greater effect upon particular residents groups. In this and the preceding inquiry, it appears that the preference judgements of Rotherham groups and male groups are unaffected by age, where as the Slough and female groups are affected to the extent that younger residents exhibit more varied preference judgements than older residents.

The exact nature of the age-preference judgements relationship is not yet defined but it is clear that the relationship does exist; it is not a spurious product of the particular respondent groupings used in the MDPREF scaling.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes (measured as degrees of a circle)	Overall pref. range excluding vector extremes (measured as degrees of a circle)	Preference consensus range (A)	% of group represented by A
22	Rotherham respondents aged 16-30 yrs	79	120	68	20	59
24	Rotherham respondents aged 31-50 yrs	80	100	100	50	90
26	Rotherham respondents aged 51-65 yrs	78	138	82	36	78
28	Rotherham respondents aged 66-81 yrs	78	145	110	41	79
23	Slough respondents aged 16-30 yrs	60	277	192	62	75
25	Slough respondents aged 31-50 yrs	67	226	128	55	69
27	Slough respondents aged 51-65 yrs	69	116	116	53	84
29	Slough respondents aged 66-81 yrs	75	195	111	67	88

Table 3.4.5 MDPREF Summary of Rotherham and Slough Respondent Age Groups

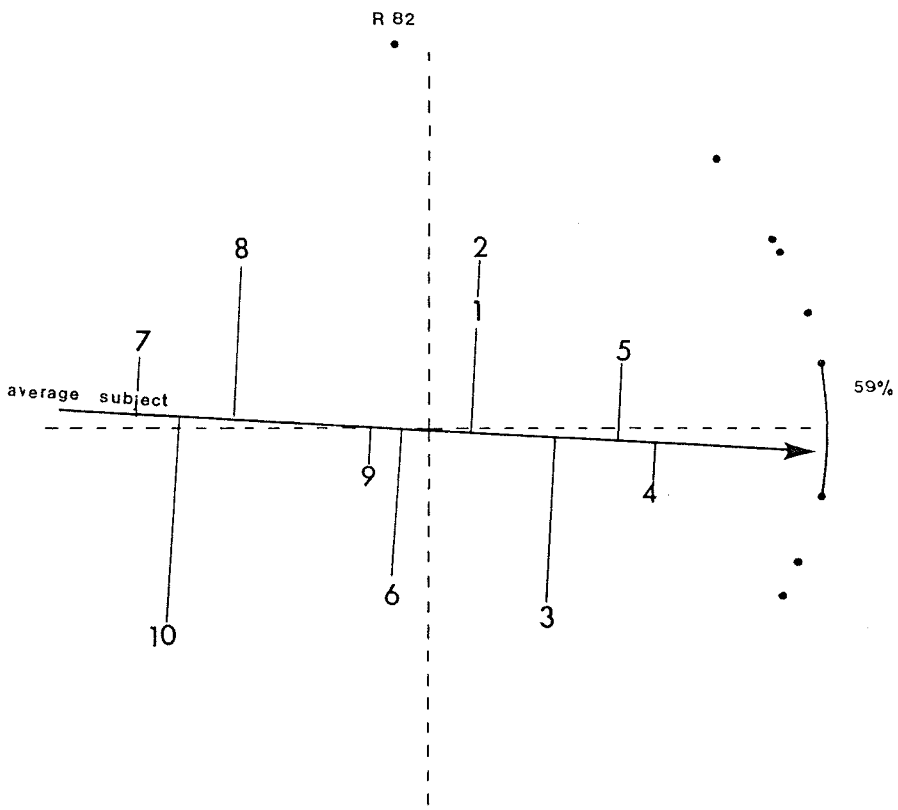


Fig.3.4.5.1 MDPREF 22 Configuration: Rotherham Respondents Aged 16-30 years

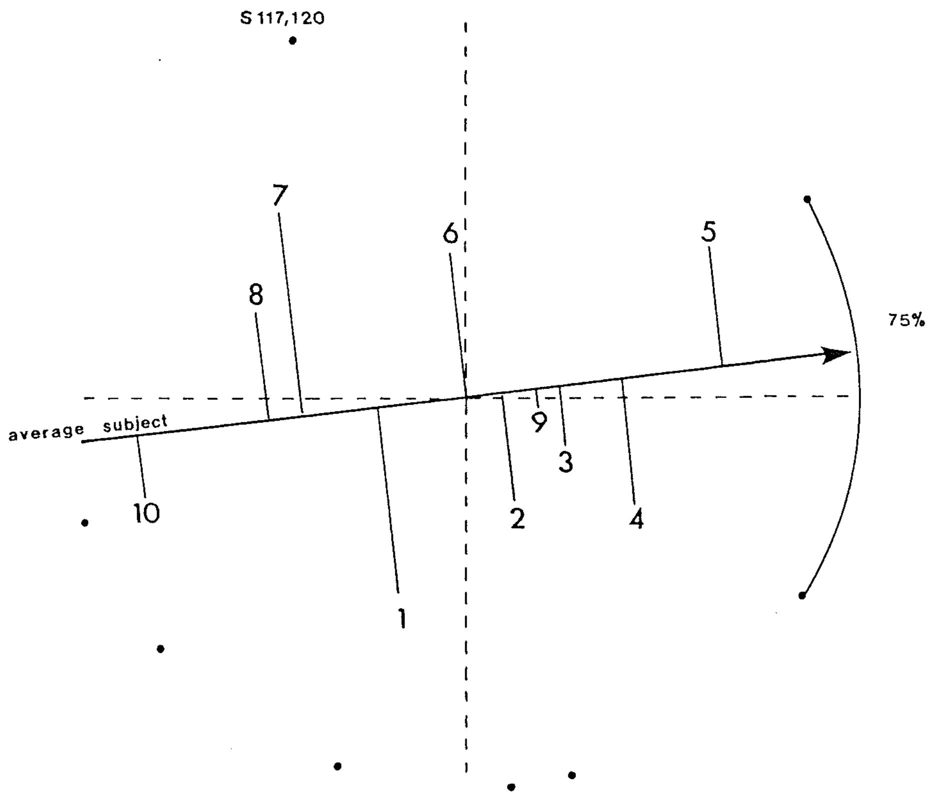


Fig.3.4.5.2 MDPREF 23 Configuration: Slough Respondents Aged 16-30 years

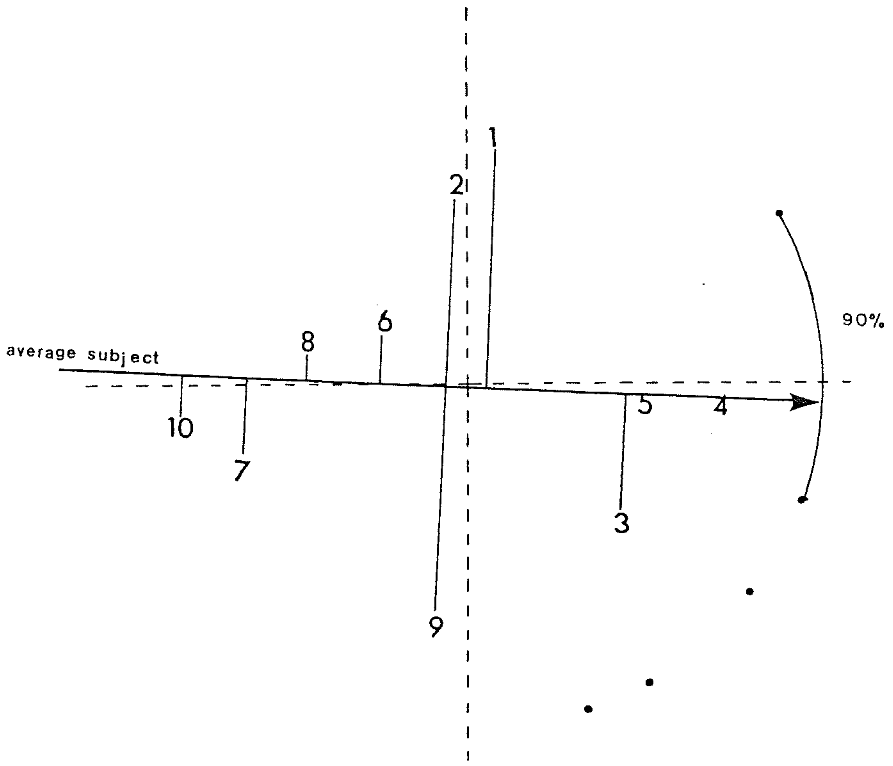


Fig.3.4.5.3 MDPREF 24 Configuration: Rotherham Respondents Aged 31-50 years

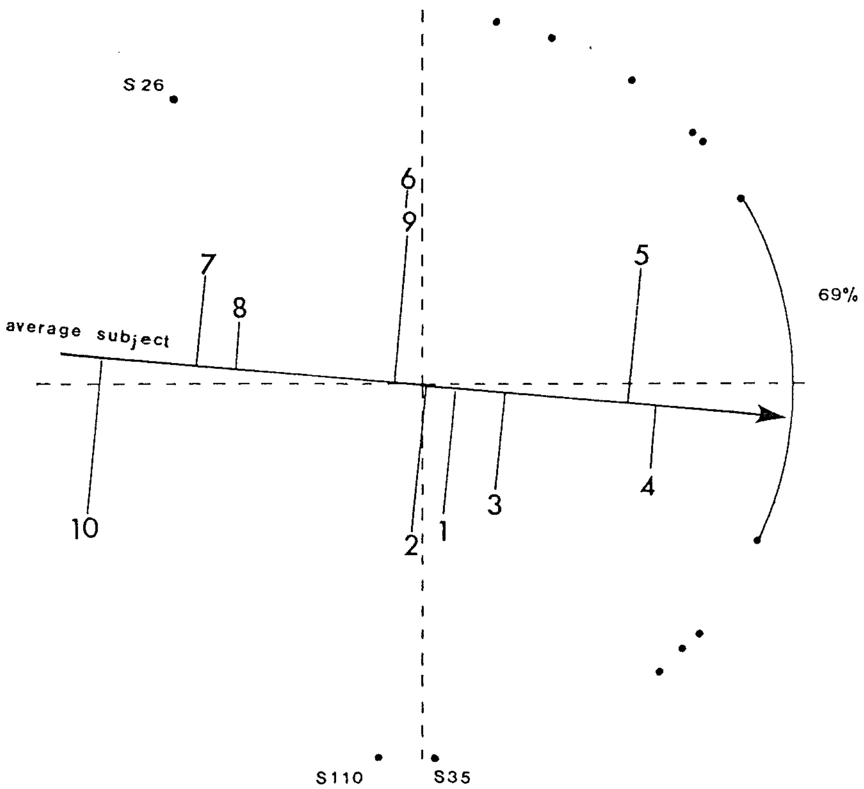


Fig.3.4.5.4 MDPREF 25 Configuration: Slough Respondents Aged 31-50 years

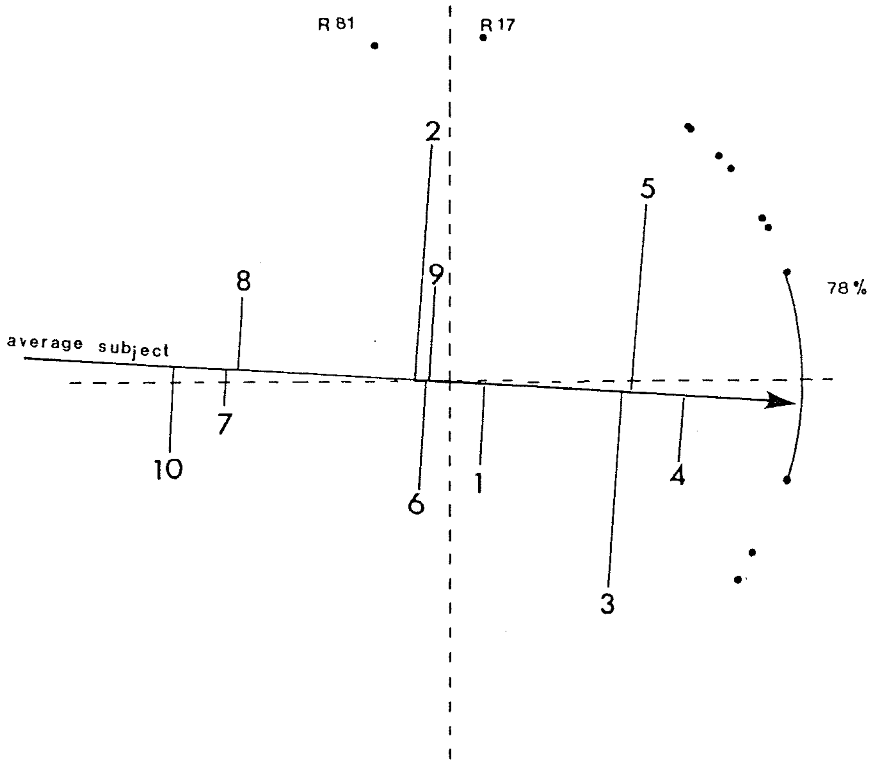


Fig.3.4.5.5 MDPREF 26 Configuration: Rotherham Respondents Aged 51-65 years

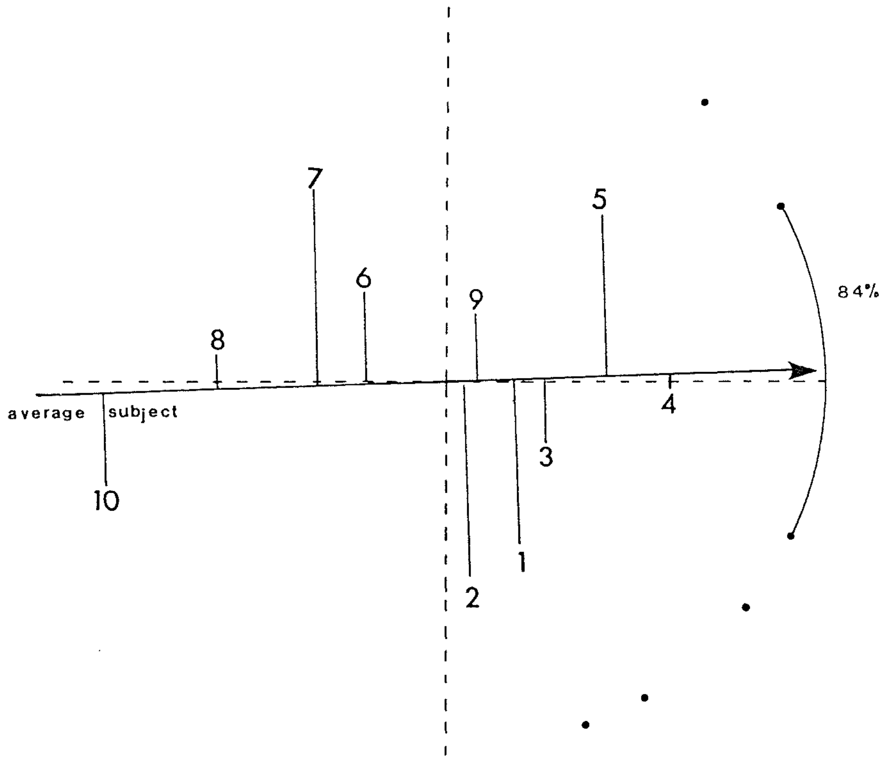


Fig.3.4.5.6 MDPREF 27 Configuration: Slough Respondents Aged 51-65 years

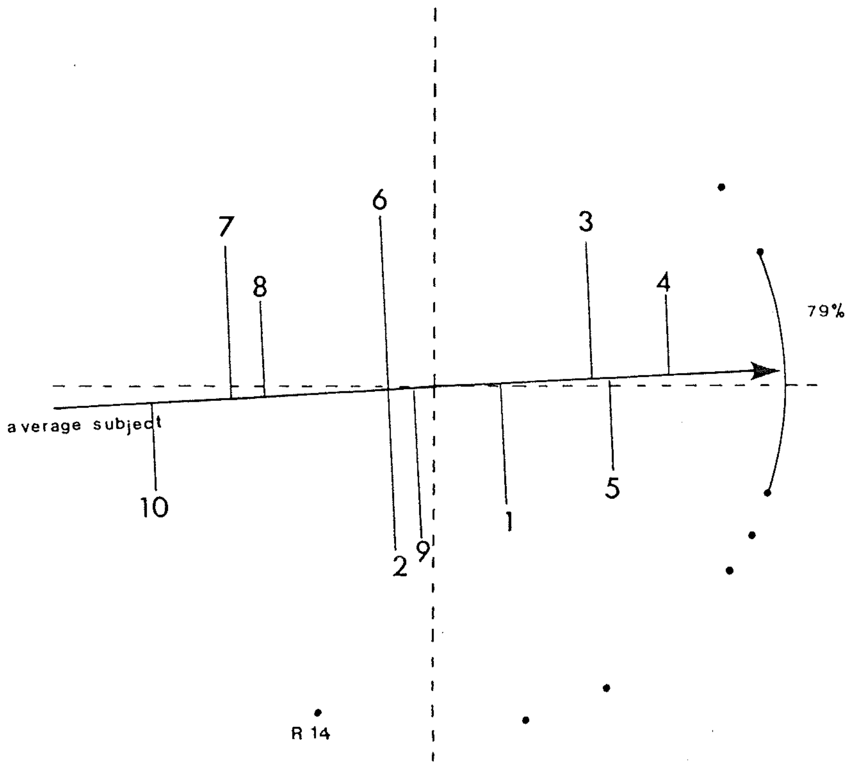


Fig.3.4.5.7 MDPREF 28 Configuration: Rotherham Respondents Aged 66-81 years

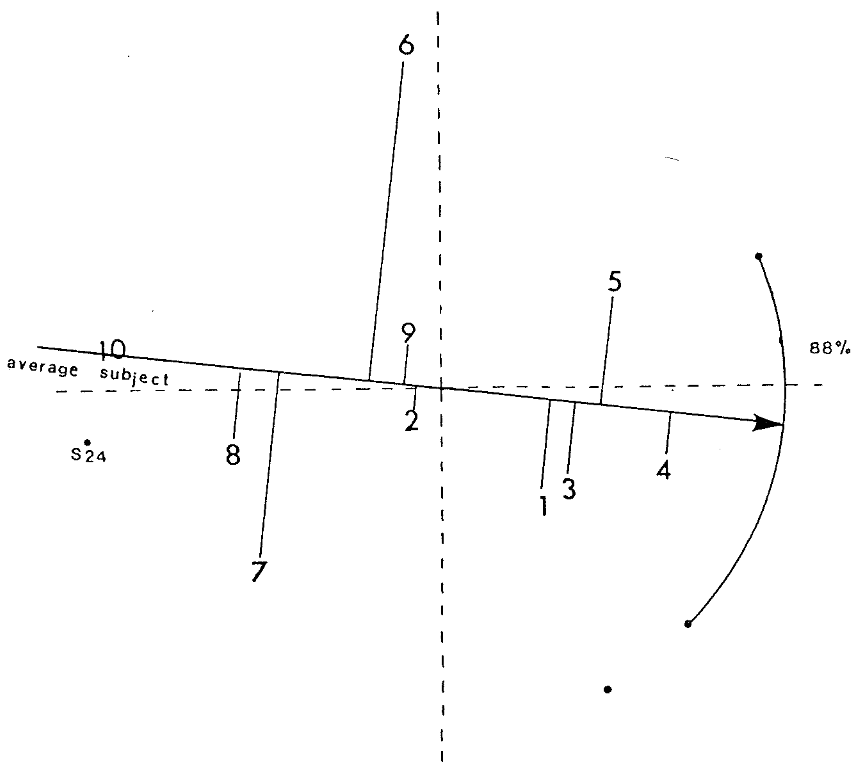


Fig.3.4.5.8 MDPREF 29 Configuration: Slough Respondents Aged 66-81 years

Figure 3.4.5.9 Age and Town of Residence Effects

MDPREF NO.	Respondent Group	Stimuli Projections (preference direction ⟶)
22	Rotherham respondents aged 16-30 yrs	7 10 8 9 6 2 1 3 5 4
24	Rotherham respondents aged 31-50 yrs	10 7 8 6 2 9 1 3 5 4
26	Rotherham respondents aged 51-65 yrs	10 7 8 2 6 9 1 3 5 4
28	Rotherham respondents aged 66-81 yrs	10 7 8 6 2 9 1 3 5 4
23	Slough respondents aged 16-30 yrs	10 8 7 1 6 2 9 3 4 5
25	Slough respondents aged 31-50 yrs	10 7 8 6 9 2 1 3 5 4
27	Slough respondents aged 51-65 yrs	10 8 7 6 9 2 1 3 5 4
29	Slough respondents aged 66-81 yrs	10 8 7 6 9 2 1 3 5 4

3.4.6 An Investigation Of The Effect Of Age, Town of Residence and Respondent Sex On Preference Judgements

In the preceding investigation a relationship is observed between age and variations in preference judgements; younger residents exhibit more varied overall preference judgements than older residents, but only in Slough and in female age groups. The purpose of this investigation is to attempt to replicate the pattern in Rotherham male and female, and Slough male and female age groups. A replication would lend greater weight to the evidence provided by earlier inquiries in support of the assumption that age affects preference judgements, it might also help determine the exact nature of the relationship.

This investigation refers to programmes:

MDPREF 30. - Rotherham males aged 16-30 years (figure 3.4.6.1)

MDPREF 31. - Rotherham females aged 16-30 years (figure 3.4.6.2)

MDPREF 32. - Slough males aged 16-30 years (figure 3.4.6.3)

MDPREF 33. - Slough females aged 16-30 years (figure 3.4.6.4)

MDPREF 34. - Rotherham males aged 31-50 years (figure 3.4.6.5)

MDPREF 35. - Rotherham females aged 31-50 years (figure 3.4.6.6)

MDPREF 36. - Slough males aged 31-50 years (figure 3.4.6.7)

MDPREF 37. - Slough females aged 31-50 years (figure 3.4.6.8)

MDPREF 38. - Rotherham males aged 51-65 years (figure 3.4.6.9)

MDPREF 39. - Rotherham females aged 51-65 years (figure 3.4.6.10)

MDPREF 40. - Slough males aged 51-65 years (figure 3.4.6.11)

MDPREF 41. - Slough females aged 51-65 years (figure 3.4.6.12)

MDPREF 42. - Rotherham males aged 66-81 years (figure 3.4.6.13)

MDPREF 43. - Rotherham females aged 66-81 years (figure 3.4.6.14)

MDPREF 44. - Slough males aged 66-81 years (figure 3.4.6.15)

MDPREF 45. - Slough females aged 66-81 years (figure 3.4.6.16)

The MDPREF programme configurations analysed are depicted in the figures specified above.

3.4.6.1 A Comparison of Results: Rotherham male groups with Rotherham female groups

Two Dimensional MDPREF adequately describes all the Rotherham male and female age groups, representing between 76% and 93% of the total data variance (see Table 3.4.6.1).

The overall subject-vector termini preference range varies across the different Rotherham male and female age groups, this variation continues when the extreme vectors are discounted (see Table 3.4.6.1).

Rotherham female age groups demonstrate a greater variation in overall preference judgements than their corresponding Rotherham male age groups with one exception. Rotherham males aged 66-81 years demonstrate a considerably greater variation in overall preference judgements (125^{o})

than Rotherham females of the same age (58^{o}). The discounted extreme subject-vectors are: R9, R36, R17 and R14 in the respective male age groups, 16-30 years, 31-50 years, 51-65 years and 66-81 years; and R82 and R81 in the respective female age groups 16-30 years and 51-65 years.

The tendencyin preceding investigations for older age groups to show less variation in preference judgements than younger age groups, is not repeated in this investigation. In this case, the eldest Rotherham male age group (66-81 years) and the second eldest Rotherham female age group (51-65 years), exhibit the most varied overall preference judgements and the youngest male and female age groups, the least varied preferences.

In both the Rotherham male and female age groups' results the middle age ranges, 31-50 years and 51-65 years, have similar overall preference ranges. Rotherham females in these age groups have preference ranges of 105^{o} and 106^{o} considerably larger than the corresponding male age groups' preference ranges of 47^{o} and 54^{o}.

The extent of the range covered by a concentration of subject-vector termini varies quite considerably between the male and female age groups (see Table 3.4.6.1).

The variation in preference judgements consensus is greater across Rotherham female age groups than male age groups. Across the female groups, it varies from only 7^{o} - 20^{o}. For each age group, the Rotherham female groups possess more varied areas of preference judgements consensus than corresponding male age groups. In the majority of groups, the proportion of total subjects represented by the consensus is high, 70% - 100%, but in two groups, females and males aged 16-30 years is in only 54% and 45% respectively.

Across both male and female age groups, the extent of the preference consensus range increases as the subject age group increases in years. As such, the eldest male and female age groups possess the most varied preference consensus ranges and the youngest age groups the least varied.

There are very few similarities across the Rotherham male age groups' average vectors stimuli projection orders (see figure 3.4.6.17). A large number of variations exist between stimulus points 7, 8, 6, 5, 4 and 3. The three stimuli clusters observed in earlier investigations, appear along three of the four male average vectors, but on only one vector are they clearly distinguishable; the average vector for Rotherham males aged 51-65 years. On the average vector for males aged 31-50 years, four different stimuli clusters may be observed, including a grouping between stimulus points 8 and 6.

The situation is rather different with respect to the female age groups' average vectors (see figure 3.4.6.17). Here the stimuli projection orders are quite similar and the greatest resemblance occurs on the older female age groups' average vectors. The average vector for the 16-30 years female group is the most dissimilar, with variations occurring between stimulus points 7 and 8, and points 9 and 2. The stimuli clusters observed in previous investigations, occur along three of the four female average vectors, but on the eldest female age group's average vector no such clusters are discernable.

3.4.6.2 A Comparison of Results: Slough male age groups with Slough female age groups

Two dimensional MDPREF scaling is adequate for all the Slough male and female age groups. In three residents groups, less than 70% of the total data variance is represented by dimensions one and two. Dimension one represents only 41% of the data variance for Slough males aged 16-30 years age group and 50% in the Slough females 31-50 years age group (see Table 3.4.6.2). In the other Slough male and female age groups, dimension one represents over 63% of the total data variance.

The overall subject-vector termini preference range varies across the different Slough male and female age groups but when the extreme vectors are discounted, the variation is more limited (see Table 3.4.6.2).

In the preceding investigation, younger age groups exhibit more varied preference judgements than older age groups, and this is only partly replicated here. In this inquiry only one of the younger age groups among both of the Slough males and Slough females residents groups, demonstrate more varied preference judgements than older groups. Slough males aged 16-30 years have a considerably more varied, undistorted overall preference range (146^{o}) than Slough males aged 51-65 years (78^{o}) and Slough males aged 66-81 years (68^{o}). Similarly, Slough females aged 31-50 years have a more varied, undistorted overall preference range (163^{o}) than Slough females aged 51-65 years (126^{o}) and Slough females aged 66-81 years (110^{o}). However in both male and female groups, one of the younger age groups exhibit the least varied overall preference ranges; Slough males aged 31-50 years (58^{o}) and Slough females aged 16-30 years (53^{o}).

Slough female age groups demonstrate a greater variation in overall preference judgements than their corresponding Slough male age groups, with one exception. Slough males aged 16-30 years, demonstrate a considerably greater variation in overall preference judgements (146^{o}) than

Slough females of the same age (53^{o}). The discounted extreme subject vectors are: S117, S120 in the Slough male age group 16-30 years; S104 and S59 in the respective male age groups, 31-50 years and 66-81 years, S16, 5111 and S7 in the female age group 16-30 years; and S26 and S24 in the respective female age groups, 31-50 years and 66-81 years.

The variation in preference judgement consensus is greater across Slough male age groups than female age groups. Across the male age groups, the preference consensus ranges from 41^{o} - 146, but across the female age groups it only varies from 33^{o} - 53^{o}. Slough males possess more varied preference consensus ranges than corresponding female age groups, with one exception. Males and females aged 31-50 years have almost identical preference consensus ranges (41^{o} and 42^{o} respectively). In the male age groups the proportion of the total subjects represented by the consensus is high, 76% - 100% but falls below 60% for three of the four female age groups (see Table 3.4.6.2).

Throughout the male and female age groups, the extent of the preference consensus range decreases as the subject age group increases in years. As such, the youngest male and female age groups possess the most varied preference consensus ranges, and the eldest age groups the least varied. The pattern is the opposite of that observed throughout Rotherham male and female age groups, where the eldest groups possess the most varied preference consensus ranges and the youngest age groups the least varied.

There are very few similarities between the Slough male age groups' average vector stimuli projection orders (see figure 3.4.6.18). Only stimulus point 4 is located in the same position on each of the average vectors. The stimuli clusters observed in earlier investigations grouping the least preferred stimuli, middle preference range stimuli and the most preferred stimuli, appear on the average vectors for Slough males aged 31-50 years and 66-81 years, Along the other age groups' average vectors only two clusters are discernable.

The situation differs somewhat with respect to the Slough female age groups. The female age groups' average vector stimuli projection orders are quite similar, although variations do exist between stimulus points 7 and 8, points 5 and 4, 3 and 1, and points 9 and 6. Along these average subject vectors are clusters of some of the middle preference range stimuli and the least preferred stimulus points 7 and 8. The stimuli clusters observed in earlier investigations do not occur on these average subject vectors.

3.4.6.3 A Comparison of Results: Rotherham male age groups with Slough male age groups

Across both the Rotherham and Slough male age groups, the overall subject-vector preference range varies before, and after, the subject-vector extremes are discounted. Slough male age groups demonstrate a greater variation in overall preference judgements than Rotherham male age groups, with one exception. Rotherham males aged 66-81 years have a more varied overall preference range (95^{o}) than Slough males of the same age (68^{o}).

In earlier investigations, younger age groups demonstrate more varied overall preference judgements than older age groups. In this inquiry, age appears to have only a partial effect on overall preference judgements. There is no relationship between age and Rotherham males' preference judgements but age does seem to affect Slough males' preferences; the youngest Slough male age group exhibits the most varied overall preference judgements among Slough males.

In both groups, a large proportion of the total subjects is represented by the consensus of subjects' preferences (over 70% in all but one group, Rotherham males aged 31-50 years), although the proportions tend to be lower among the Rotherham age groups than the corresponding Slough age groups. However the extent of the range covered by a concentration of subject-vector termini varies considerably between Rotherham and Slough male age groups. The Slough male age groups have more varied preference consensus ranges than Rotherham males of the same ages. In addition, among Rotherham male age groups, the extent of the preference consensus range increases as the subject age group increases in years. Whereas among Slough male age groups, the extent of the preference consensus range, tends to decrease as the subject age group increases in years.

There is very little similarity between the Rotherham and Slough male age groups' average vector stimuli projection orders (see figures 3.4.6.17 and 3.4.6.18). Only the average vectors for the two eldest male age groups, Slough and Rotherham males aged 66-81 years, demonstrate any similarity. Variations in stimuli projection orders on these average vectors occur between stimulus points 6 and 9, and 3 and 1. Stimuli clusters along the Rotherham and Slough male average vectors are dissimilar. The characteristic stimuli clusters observed in earlier investigations, are only clearly discernable on one of the Rotherham subject vectors; Rotherham males aged 51-65 years.

3.4.6.4 A Comparison of Results: Rotherham female age groups with Slough female age groups

Across both Rotherham and Slough female age groups, the overall subject-vector preference range varies before, and after, the subject-vector extremes are discounted. Slough female age groups demonstrate a greater variation in overall preference judgements than Rotherham male age groups, with one exception. Rotherham females aged 16-30 years have a more varied overall preference range (67^{o}) than Slough females of the same age (53^{o}).

In earlier investigations, younger age groups demonstrate more varied overall preference judgements than older age groups. In this inquiry, age appears to have only a partial effect on overall preference judgements. There is no relationship between age and Rotherham females' preference judgements, but age does seem to affect Slough females' preferences; one of the younger Slough female age groups (31-50 years) exhibit the most varied overall preference judgements.

On the whole in the Rotherham female groups, a much greater proportion of the total subjects is represented by the consensus of subjects preferences (54% - 100%); in three of the four Slough female groups, the percentage of respondents represented by the preference consensus is below 60%. Looking at corresponding age groups the proportions are lowest among Slough groups with one exception, Slough females aged 16-30 years. The extent of the range covered by a concentration of subject-vector termini varies between Rotherham and Slough female age groups. The two younger Slough female age groups (16-30 years and 31-50 years) have more varied preference consensus ranges than the two younger Rotherham female age groups. However, the two older Slough female age groups (51-65 years and 66-81 years) have less varied preference consensus ranges than the two older Rotherham female age groups. Throughout Rotherham female age groups, the extent of the preference consensus range increases as the subject age group increases in years. In the Slough female age groups on the other hand, the extent of the preference consensus range decreases as the subject age group increases in years.

The stimuli projection orders along the Rotherham and Slough female age groups' average vectors are similar (see figures 3.4.6.17 and 3.4.6.18). However variations do occur between stimulus points 7 and 8, points 9 and 6 and points 3 and 1. The characteristic stimuli clusters observed in earlier investigations, are discernable along three of the Rotherham female age groups' average vectors, but not discernable on any of the Slough female age groups' average vectors, or the average vector for Rotherham females aged 66-81 years.

3.4.6.5 Investigation Results Summary

(i) The data variance represented by dimension one is low for three of the four Slough female age groups and the youngest Slough male age group. In the Slough female age groups, 16-30 years, 31-50 years and 51-65 years dimension one accounts for 54%, 50% and 57% of the total data variance. In the Slough males 16-30 years age group it accounts for only 41% of the data variance.

(ii) Rotherham female age groups tend to have more varied overall preference judgements than their corresponding Rotherham male age groups. Likewise, Slough female age groups tend to have more varied overall preference judgements than their corresponding male age groups.

(iii) Slough male and female age groups tend to have more varied overall preference judgements than Rotherham male and female groups of the same age.

(iv) Middle range age groups (31-50 years and 51-65 years) in Rotherham male and female groups have very similar ranges of overall preference judgements. Middle range age groups in Slough male and female groups have dissimilar ranges of overall preference judgements.

(v) In this inquiry age appears to have only a partial effect upon residents overall preference judgements. There is no relationship between age and Rotherham males and Rotherham female age groups' preference judgements. However, age does appear to affect Slough male and Slough female age groups' preference judgements. One of the younger age groups in each of the Slough male and Slough female residents sets, demonstrate more varied overall preference judgements than the older age groups.

(vi) There is a greater variation across Rotherham female age groups' areas of preference consensus than there is across Rotherham male age groups. However, the variation across Slough male age groups' areas of preference consensus is greater than that of Slough female age groups.

(vii) Rotherham female age groups possess more varied preference consensus areas than those of Rotherham male age groups. Conversely, Slough male age groups tend to have more varied preference consensus areas than Slough female age groups.

(viii) The proportion of total subjects represented by the preference consensus areas varies: Slough male age groups' proportions are larger than corresponding Rotherham male age groups; and Rotherham female age group proportions are larger than corresponding Slough female age groups with one exception, Rotherham females aged 16-30 years.

(ix) Among Rotherham male and female age groups, areas of preference consensus increase in range as the subject age group increases in years. Conversely, among Slough male and female age groups, areas of preference consensus decrease in range as the subject age group increases in years.

(x) Average subject vector stimuli projection orders are similar for Rotherham male and female age groups, but dissimilar for Slough male and female age groups when the stimuli projection orders for Rotherham and Slough age groups' average vectors are directly compared, similarities occur only between the female age groups.

(xi) The stimuli clusters observed in earlier investigations occur along only three average vectors. These vectors are the Rotherham female vectors for age groups 16-30 years, 31-50 years and 51-65 years.

(xii) The results of this and preceding investigations (3.4.4 and 3.4.5) have shown that age affects residents' overall preference judgements. Younger residents demonstrate more varied overall preference judgements than older residents, though the effect is not discernable among Rotherham (only) residents groups. Age is also shown to affect the preference consensus range. Throughout the Rotherham groups, the consensus range increases as the respondent age groups increase in years, but in the Slough groups, the consensus range decreases as the respondent age groups increase in years.

The effects of the interviewee town of residence and respondent sex are clearly discernable from the results of the investigations. Both effects have have a greater influence than age, on the residents' groups overall preference judgements. Slough residents age groups exhibit more varied overall preference judgements than corresponding Rotherham residents age groups, and female residents' age groups exhibit more varied overall preference ranges than corresponding male residents age groups.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes (measured as degrees of a circle)	Overall pref. range excluding vector extremes (measured as degrees of a circle)	Preference consensus range (A)	% of group repre-sented by A
30	Rotherham males aged 16-30 yrs	93	91	26	7	75
34	Rotherham males aged 31-50 yrs	84	92	47	13	45
38	Rotherham males aged 51-65 yrs	85	126	54	23	73
42	Rotherham males aged 66-81 yrs	76	125	95	20	70
31	Rotherham females aged 16-30 yrs	78	120	67	18	54
35	Rotherham females aged 31-50 yrs	81	105	105	29	70
39	Rotherham females aged 51-65 yrs	76	154	106	47	81
43	Rotherham females aged 66-81 yrs	85	58	58	58	100

Table 3.4.6.1 MDPREF Summary for Rotherham Male and Female Respondent Age Groups

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
32	Slough males aged 16-30 yrs	67	184	146	146	76
36	Slough males aged 31-50 yrs	79	103	58	41	80
40	Slough males aged 51-65 yrs	80	78	78	78	100
44	Slough males aged 66-81 yrs	79	110	68	51	82
33	Slough females aged 16-30 yrs	66	360	53	53	81
37	Slough females aged 31-50 yrs	65	198	163	42	55
41	Slough females aged 51-65 yrs	73	126	126	37	57
45	Slough females aged	78	205	110	33	57

Table 3.4.6.2 MDPREF Summary for Slough Male and Female Respondent Age Groups

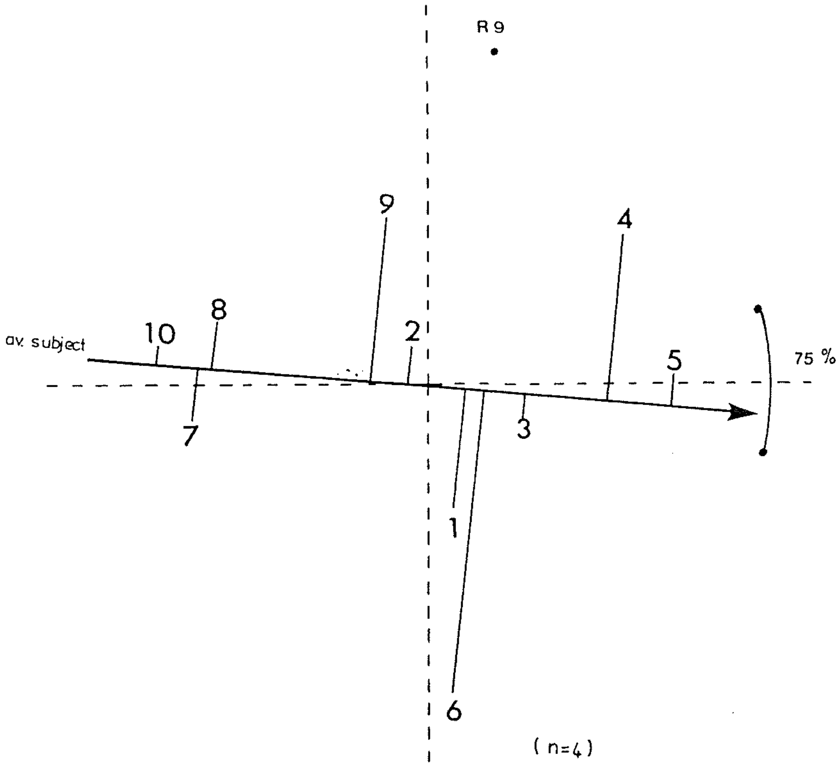


Fig.3.4.6.1 MDPREF 30 Configuration: Rotherham Males Aged 16-30 years

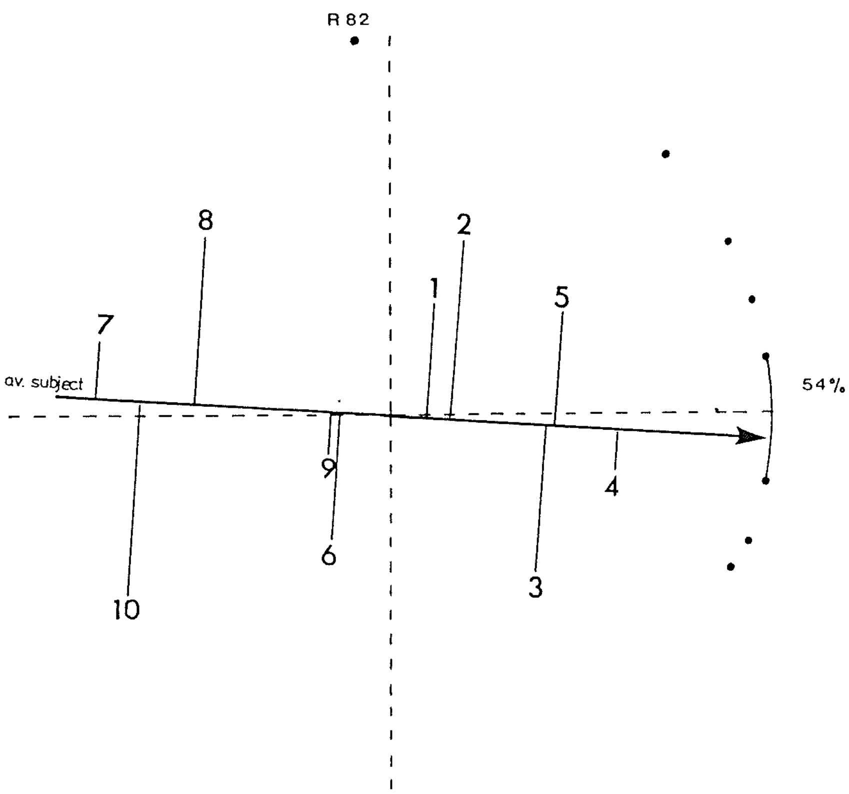


Fig.3.4.6.2 MDPREF 31 Configuration: Rotherham Females Aged 16-30 years

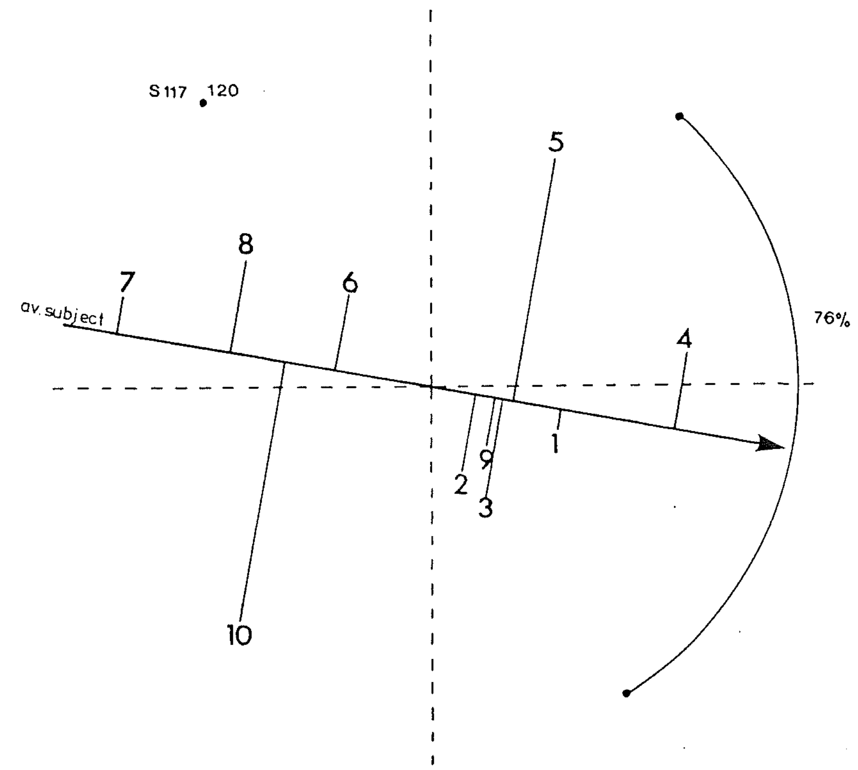


Fig.3.4.6.3 MDPREF 32 Configuration: Slough Males Aged 16-30 years

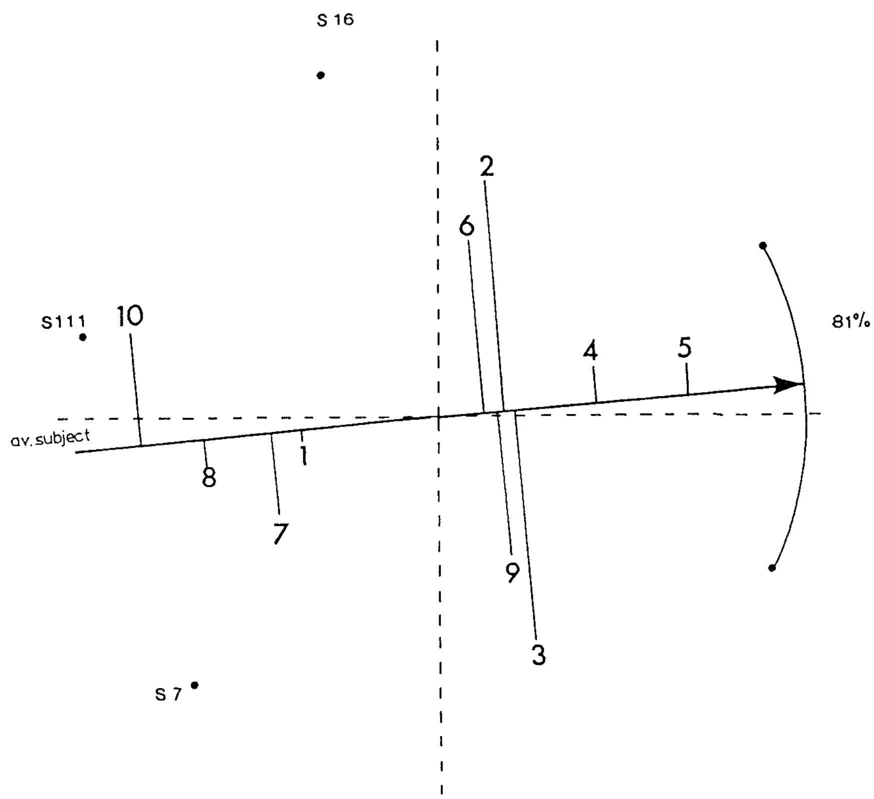


Fig.3.4.6.4 MDPREF 33 Configuration: Slough Females Aged 16-30 years

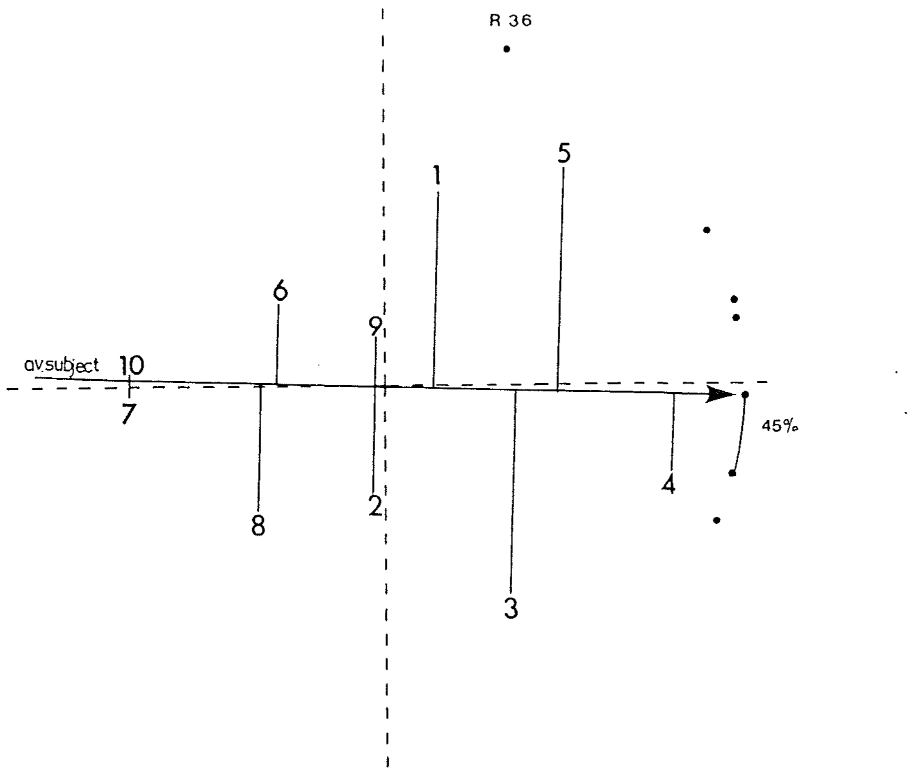


Fig.3.4.6.5 MDPREF 34 Configuration:Rotherham Males Aged 31-50 years

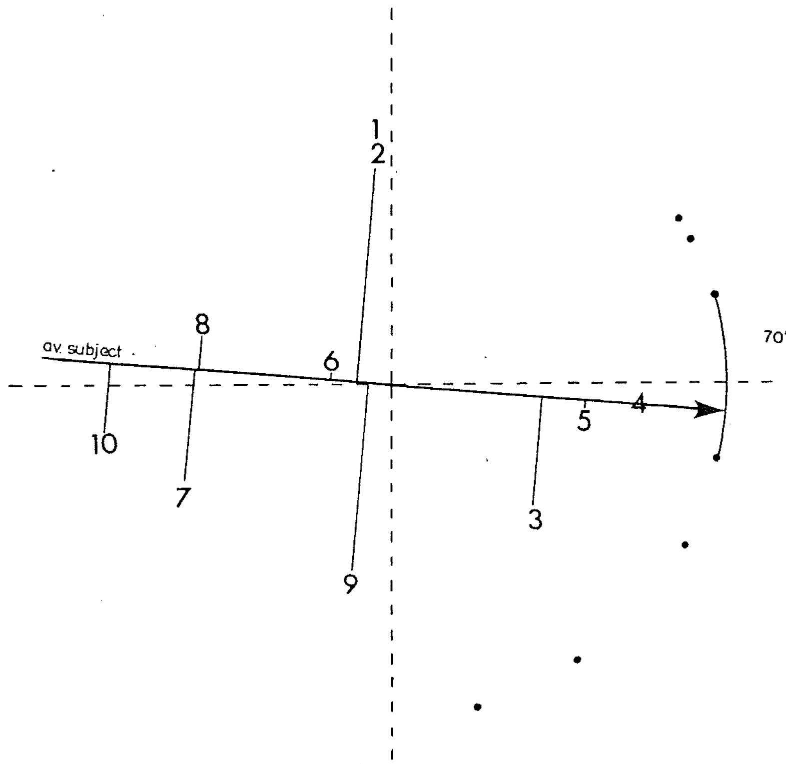


Fig.3.4.6.6 MDPREF 35 Configuration: Rotherham Females Aged 31-50 years

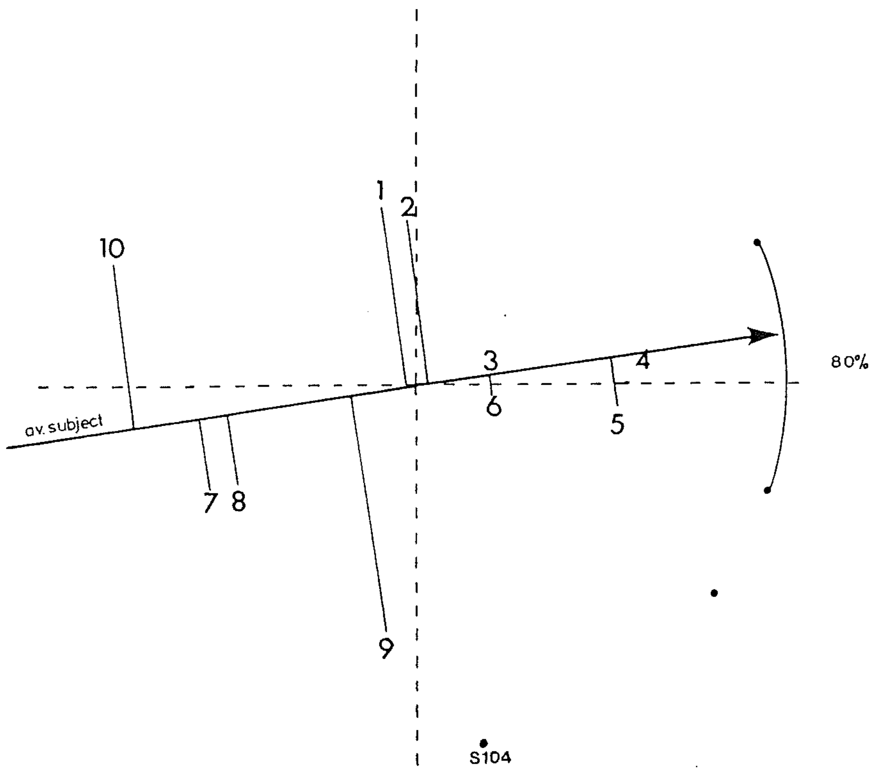


Fig.3.4.6.7 MDPREF 36 Configuration: Slough Males Aged 31-50 years

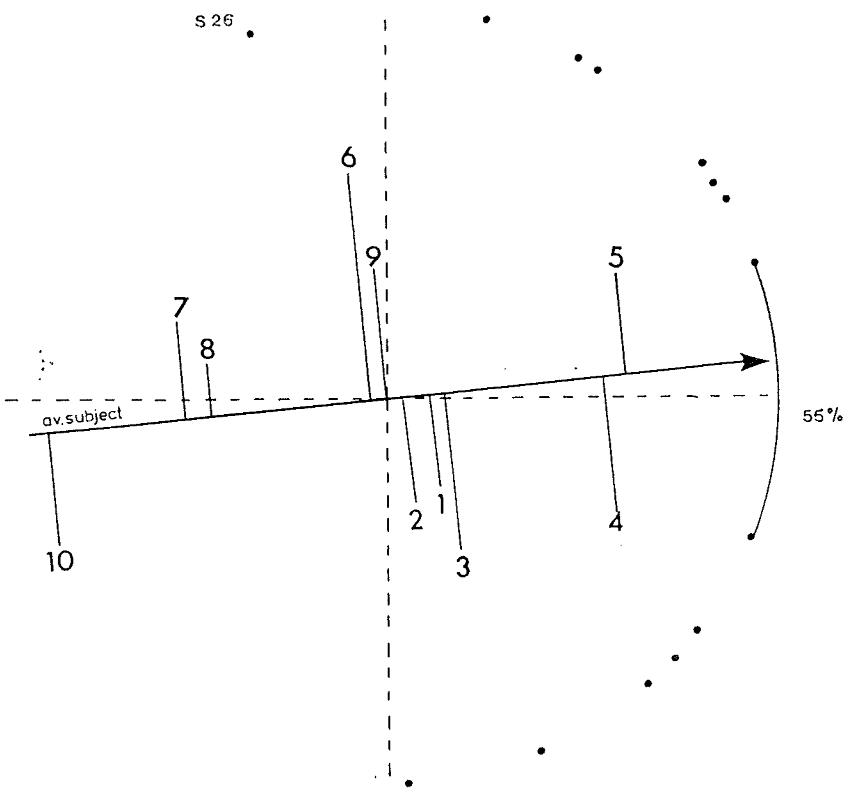


Fig.3.4.6.8 MDPREF 37 Configuration: Slough Females Aged 31-50 years

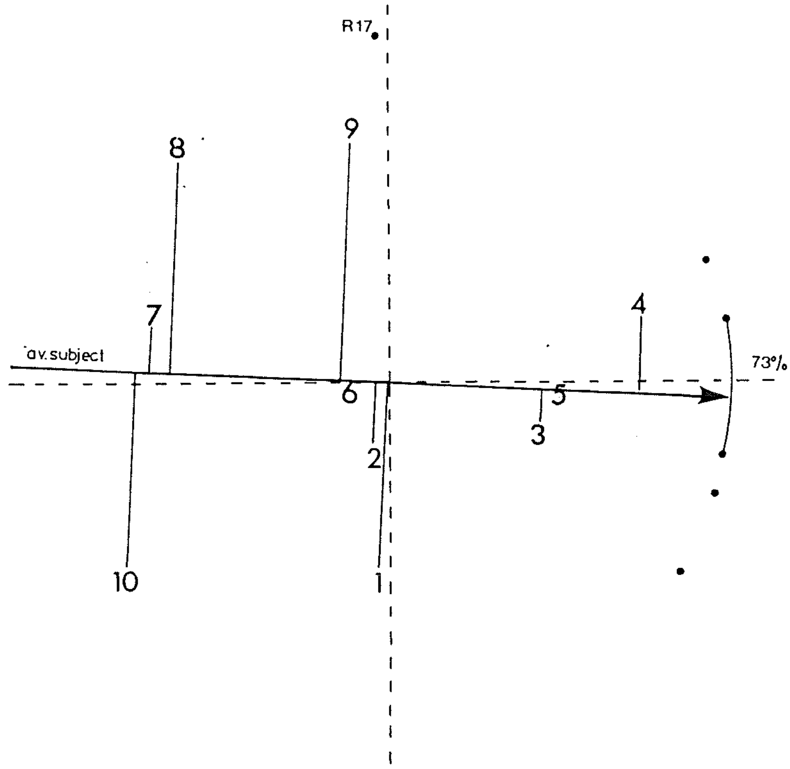


Fig.3.4.6.9 MDPREF 38 Configuration: Rotherham Males Aged 51-65 years

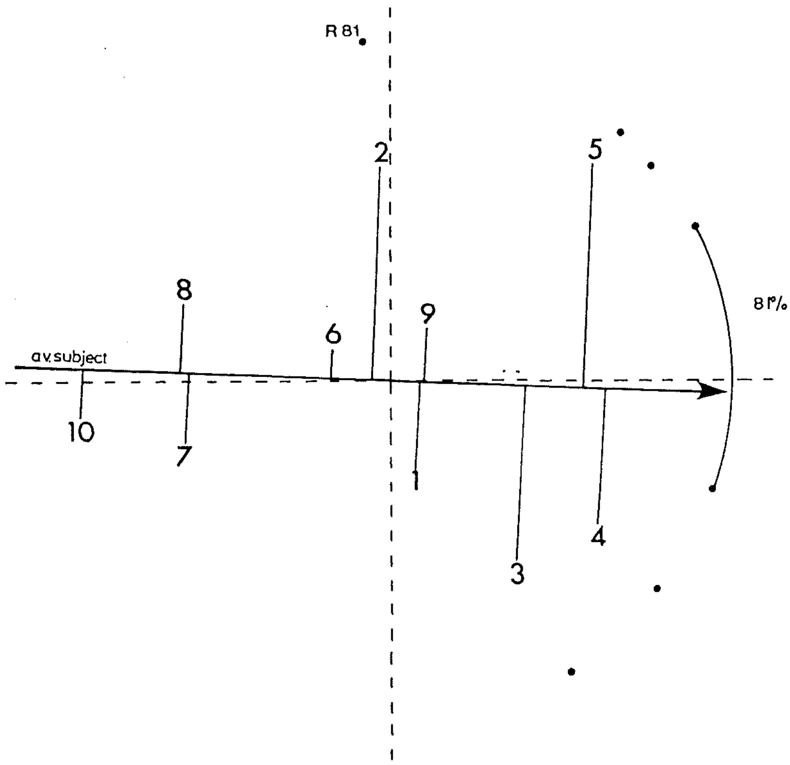


Fig.3.4.6.10 MDPREF 39 Configuration: Rotherham Females Aged 51-65 years

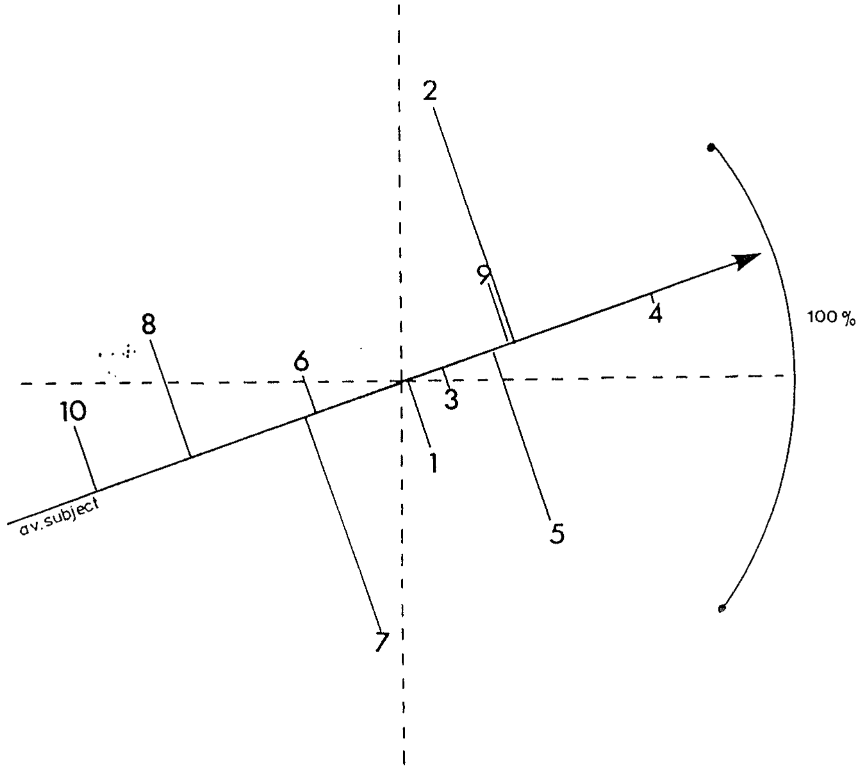


Fig.3.4.6.11 MDPREF 40 Configuration: Slough Males Aged 51-65 years

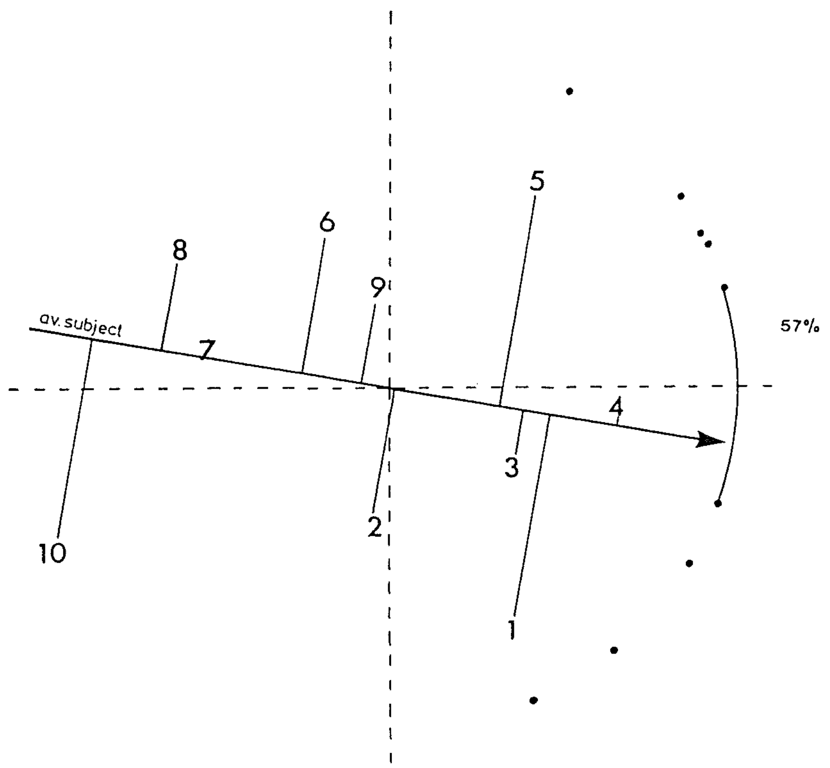


Fig.3.4.6.12 MDPREF 41 Configuration: Slough Females Aged 51-65 years

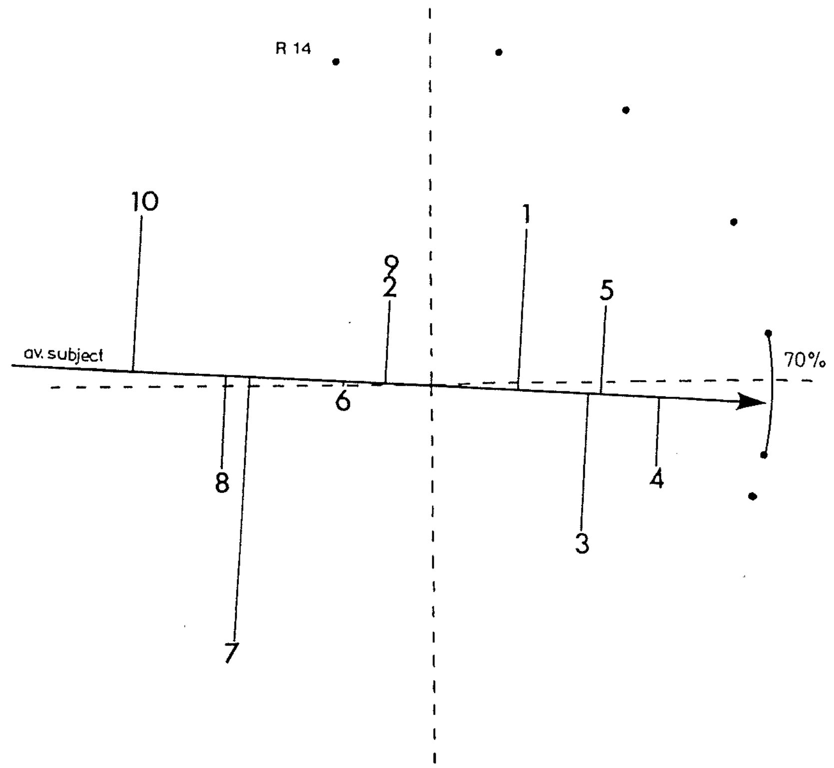


Fig.3.4.6.13 MDPREF 42 Configuration: Rotherham Males Aged 66-81 years

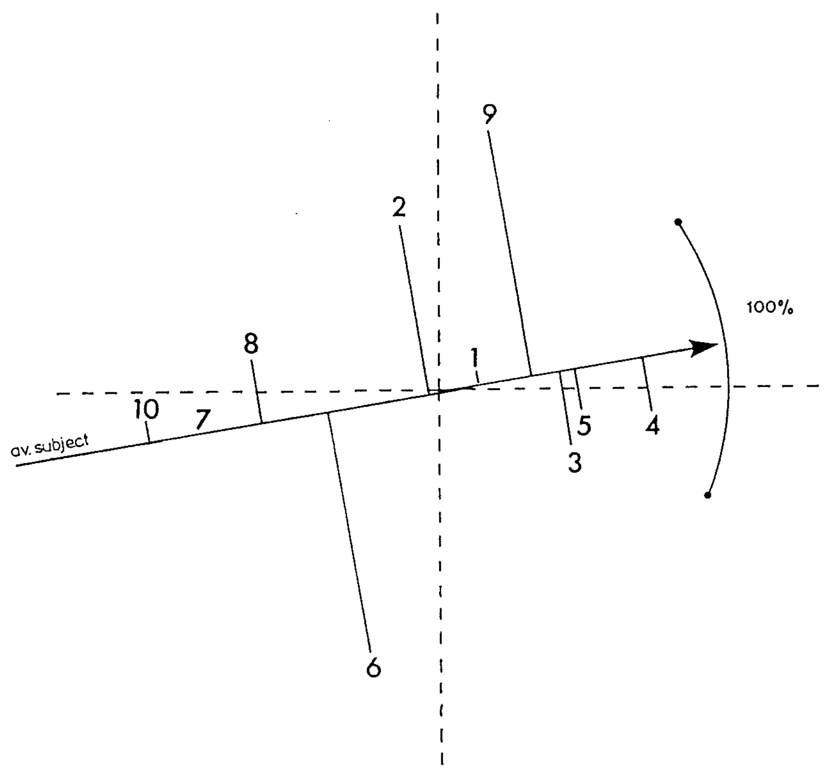


Fig.3.4.6.14 MDPREF 43 Configuration: Rotherham Females 66-81 years

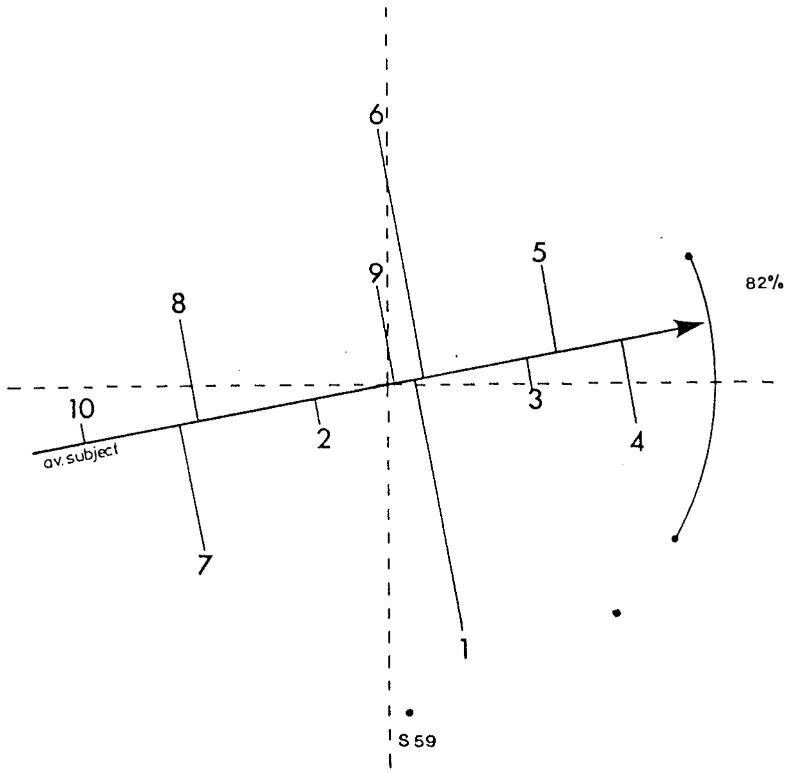


Fig.3.4.6.15 MDPREF 44 Configuration: Slough Males Aged 66-81 years

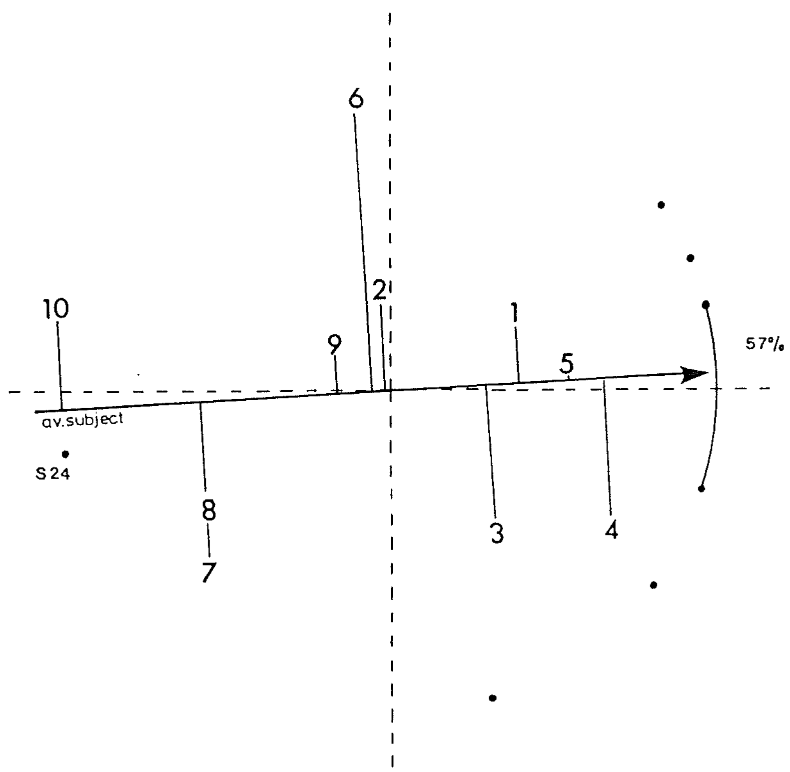


Fig.3.4.6.16 MDPREF 45 Configuration: Slough Females Aged 66-81 years

Figure 3.4.6.17 Age & Sex Effects on Rotherham Respondent Preferences

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction ⟶)
30	Rotherham males aged 16-30 yrs	10 78 9 2 1 6 3 4 5
31	Rotherham females aged 16-30 yrs	7 10 8 9 6 1 2 53 4
34	Rotherham males aged 31-50 yrs	10 7 6 8 9 1 2 5 3 4
35	Rotherham females aged 31-50 yrs	10 8 7 6 9 2 1 3 5 4
38	Rotherham males aged 51-65 yrs	10 7 8 96 2 1 3 5 4
39	Rotherham females aged 51-65 yrs	10 8 7 6 2 1 9 3 5 4
42	Rotherham males aged 66-81 yrs	10 8 7 6 9 2 1 5 3 4
43	Rotherham females aged 66-81 yrs	10 7 8 6 2 1 9 5 3 4

Figure 3.4.6.18 Age & Sex Effects on Slough Respondent Preferences

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
32	Slough males aged 16-30 yrs	7 8 10 6 2 9 5 3 1 4
33	Slough females aged 16-30 yrs	10 7 8 9 1 2 6 3 5 4
36	Slough males aged 31-50 yrs	10 8 7 6 1 3 5 9 2 4
37	Slough females aged 31-50 yrs	10 7 8 2 9 1 6 3 5 4
40	Slough males aged 51-65 yrs	10 8 7 1 6 9 2 3 4 5
41	Slough females aged 51-65 yrs	10 7 8 6 9 2 1 3 4 5
44	Slough males aged 66-81 yrs	10 8 7 6 9 2 5 3 1 4
45	Slough females aged 66-81 yrs	10 7 8 9 6 2 3 1 5 4

3.4.7 An Investigation Of The Preference Judgements of Indigenous and Non-Indigenous Residents

It is possible that residents who were born, raised and lived all their life in the interview towns judge the townscape photographs (especially local views) quite differently from those residents who have not spent their entire life in Rotherham or Slough. It is the purpose of this inquiry to assess this effect.

This investigation refers to programmes:

MDPREF 46. - Rotherham indigenous residents (figure 3.4.7.1)

MDPREF 47. - Rotherham non-indigenous residents (figure 3.4.7.2)

MDPREF 48. - Slough indigenous residents (figure 3.4.7.3)

MDPREF 49. - Slough non-indigenous residents (figure 3.4.7.4)

The MDPREF programme configurations analysed are depicted in the figures specified above.

3.4.7.1 A Comparison of Results: Rotherham indigenous residents with Rotherham non-indigenous residents

Two dimensional MDPREF scaling is adequate for both data sets representing 76% - 79% of the total data variance (see Table 3.4.7)

The overall subject-vector termini preference range varies considerably between the two groups but when the extreme subject vectors are discounted the variation is less pronounced. Rotherham indigenous residents then demonstrate a slightly more varied preference range than Rotherham non-indigenous residents, (see Table 3.4.7). The discounted indigenous extreme subject-vectors are R14, R81 and R82 and R113 in the non-indigenous residents group. The extent of the subjects preference consensus range varies only slightly between the two groups. Rotherham indigenous residents possess a slightly more varied consensus of preference judgements than non-indigenous residents. In both groups an equally large proportion of the total subjects (85%) is represented by the preference consensus, see Table 3.4.7.

Rotherham indigenous and non-indigenous residents' average subject-vector stimuli projection orders are very similar, with the main variation occurring between stimulus points 3 and 5 (see figure 3.4.7.5). Along both groups average vectors, the stimuli clusters observed in earlier investigations, do exist, but on the indigenous group average vector, adjacent cluster and stimuli points 3 and 1, lie close to each other.

3.4.7.2 A Comparison of Results: Slough indigenous residents with Slough non-indigenous residents

Two dimensional MDPREF scaling is again adequate for both groups, see Table 3.4.7, though dimension one represents only 50% and 56% of the total data variance, for the indigenous and non-indigenous groups respectively, see Table 3.3.2.3.

The overall subject-vector termini preference range varies slightly between the two groups when the extreme vectors are included. When excluded, the variation is larger and reversed, see Table 3.4.7. such that Slough non-indigenous respondents to exhibit the most varied preference range. The discounted extreme subject vectors are S16, S117 and S120 in the indigenous residents group, and S24 and S7 in the non-indigenous residents group.

The extent of the range covered by a concentration of subject-vector termini varies only slightly between the two groups. Slough indigenous residents demonstrate a slightly more varied consensus of preference judgements than non-indigenous residents. In both groups a large proportion of the total subjects (79% - 87%) is represented by the preference consensus.

The stimuli projections orders along the Slough indigenous and non-indigenous residents' average subject vectors are similar (see figure 3.4.7.5). Some variations do occur between stimulus points 7 and 8, and points 2 and 9. Stimuli clusters observed in earlier investigations occur along the average vectors although on both groups' average vectors, adjacent stimulus points 3 and 1 lie close together.

3.4.7.3 Investigation Summary

(i) The data variance represented by dimension one is low for the Slough indigenous and non-indigenous residents groups, it accounts for 50% and 56% of the total data variance respectively.

(ii) In Rotherham indigenous residents have more varied overall preference judgements than non-indigenous residents. In the Slough group the same pattern occurs until the extreme subject vectors are discounted, when non-indigenous respondents exhibit a more varied overall preference range.

(iii) In Slough and Rotherham, indigenous groups have more varied preference consensus ranges than indigenous residents.

(iv) The proportion of the total subjects represented by the consensus areas is high (79% - 87%) for Rotherham and Slough indigenous and non-indigenous residents.

(v) The stimuli projection orders along the four residents groups' average subject vectors are very similar.

(vi) The stimuli projection clusters observed on average vectors in the earlier investigations, are discernable along the Rotherham and Slough indigenous and non-indigenous residents' average vectors. On three of the four average vectors, stimulus points 3 and 1 lie close together, such that stimulus point 3 appears with the middle preference range stimuli cluster instead of the most preferred stimuli cluster.

(vii) In this investigation no obvious relationship between birth place and preference judgement was observed, except for indigenous respondents of both towns, who exhibited slightly more varied preference consensus ranges than non-indigenous residents.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group repre sented by A
			(measured as degrees of a circle)			
46	Rotherham indigenous respondents	76	216	132	52	85
47	Rotherham non-indigenous respondents	79	143	85	40	85
48	Slough indigenous respondents	63	270	152	97	79
49	Slough non-indigenous respondents	67	264	175	90	87

Table 3.4.7 MDPREF Summary of Rotherham & Slough Indigenous and Non-Indigenous Groups

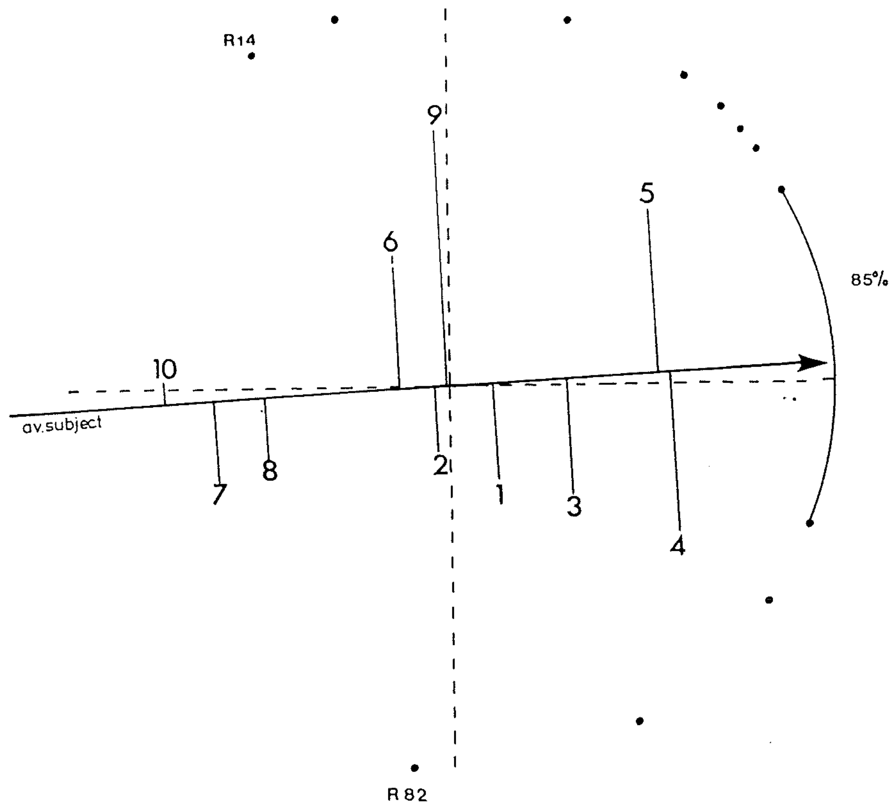


Fig.3.4.7.1 MDPREF 46 Configuration: Rotherham Indigenous Residents

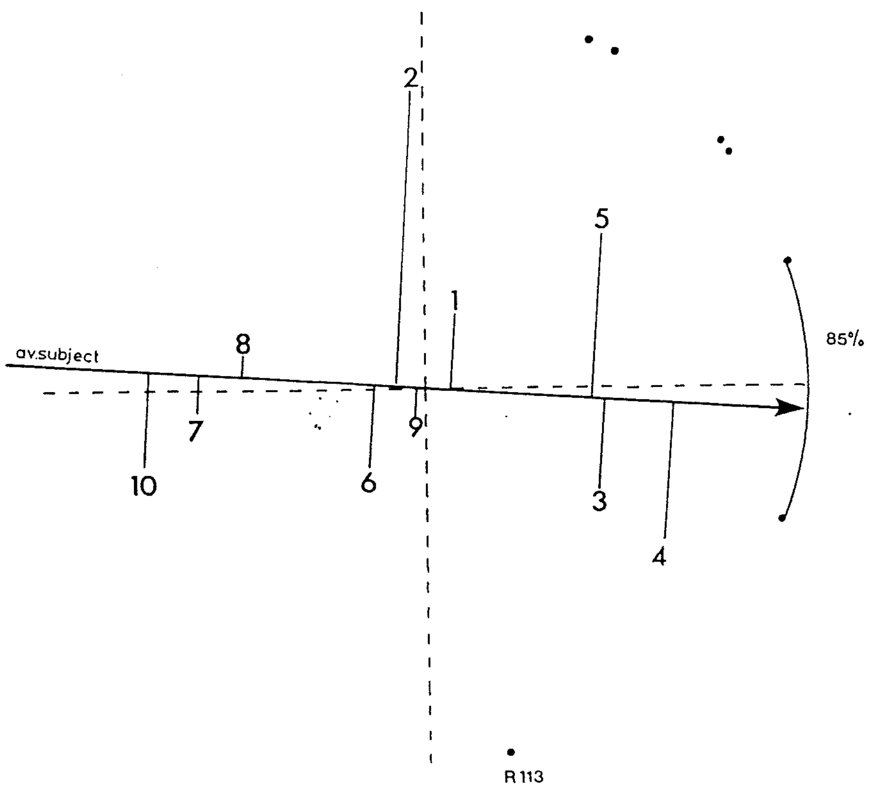


Fig.3.4.7.2 MDPREF 47 Configuration: Rotherham Non-Indigenous Residents

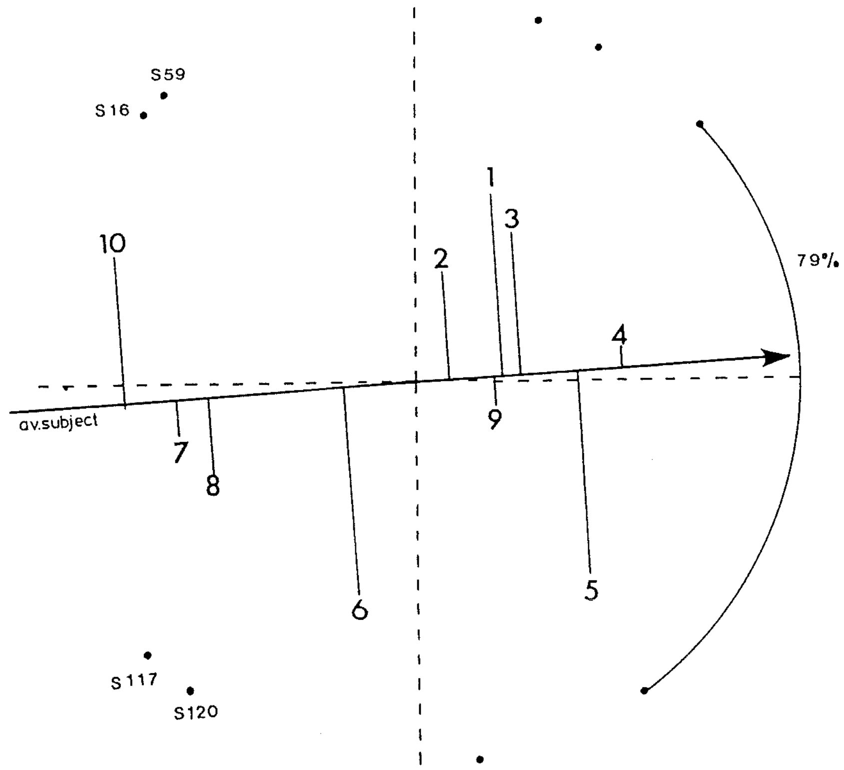


Fig.3.4.7.3 MDPREF 48 Configuration: Slough Indigenous Residents

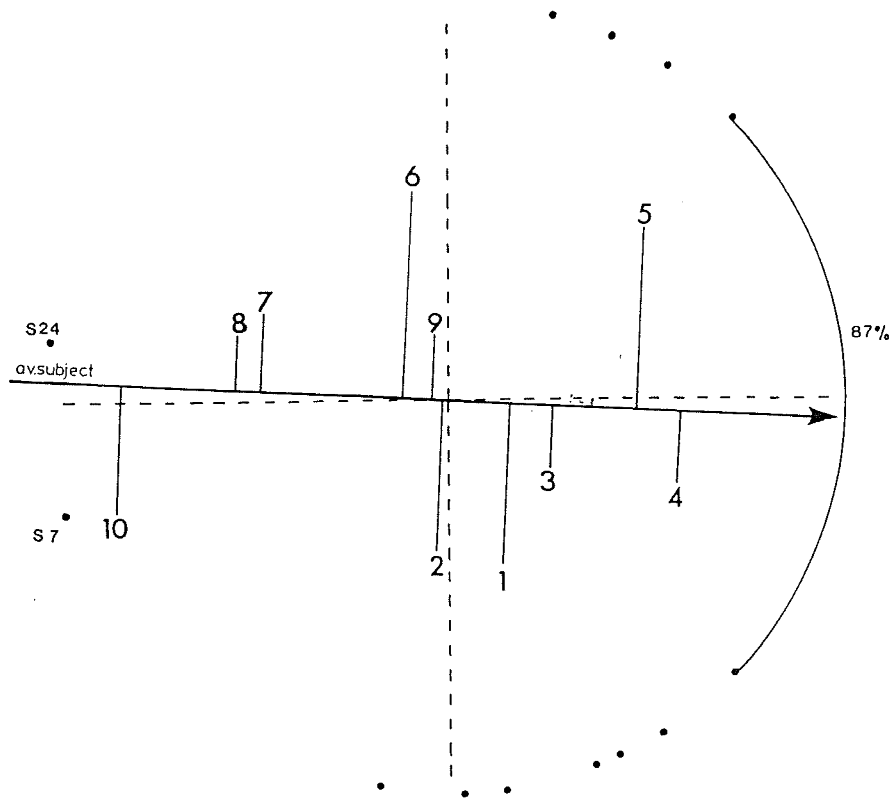


Fig.3.4.7.4 MDPREF 49 Configuration: Slough Non-Indigenous Residents

Figure 3.4.7.5 Birth Place Effect Stimuli Projections (preference direction →)

MDPREF NO.	Respondent Groups	Stimuli Projections
46	Rotherham indigenous respondents	10 7 8 6 2 9 1 3 5 4
47	Rotherham non-indigenous respondents	10 7 8 6 2 9 1 5 3 4
48	Slough indigenous respondents	10 7 8 6 2 91 3 5 4
49	Slough non-indigenous respondents	10 8 7 6 9 2 1 3 5 4

3.4.8 An Investigation of Preference Judgements Of Male And Female Indigenous And Non-Indigenous Residents

In the preceding investigation, the indigenous respondent groups were shown to have more varied preference consensus ranges than non-indigenous residents. Should the results of this inquiry show that indigenous residents of both sexes, in Rotherham and Slough, continue to demonstrate greater variation in preference judgements, a relationship between birth place and preference judgement may be deduced. However, if the results show that for both sexes, neither indigenous or non-indigenous residents exhibit any particular preference variation pattern, it should be concluded that a resident's place of birth does not influence his preference judgement. Finally, if this investigation reveals that residents of the same sex, be they indigenous and or, non-indigenous, exhibit more or less varied preference judgements, respondent sex not place of birth, would be seen to have an overriding effect on preference judgements.

This investigation refers to programmes:

MDPREF 50. - Rotherham indigenous males (figure 3.4.8.1)

MDPREF 51. - Rotherham non-indigenous males (figure 3.4.8.2)

MDPREF 52. - Rotherham indigenous females (figure 3.4.8.3)

MDPREF 53. - Rotherham non-indigenous females (figure 3.4.8.4)

MDPREF 54. - Slough indigenous males (figure 3.4.8.5)

MDPREF 55. - Slough non-indigenous males (figure 3.4.8.6)

MDPREF 56. - Slough indigenous females (figure 3.4.8.7)

MDPREF 57. - Slough non-indigenous females (figure 3.4.8.8)

The MDPREF programme configurations analysed are depicted in the figures specified above.

3.4.8.1 A Comparison of Results: Rotherham indigenous males with Rotherham indigenous females

Two dimensional MDPREF scaling is adequate for Rotherham indigenous male and female groups. Dimensions one and two represent 76% - 79% of the total data variation, see Table 3.4.8.

The overall subject-vector termini preference range varies between the two groups but becomes slightly more restricted after the extreme vectors are discounted, see Table 3.4.8. In both instances, Rotherham indigenous females demonstrate a slightly larger variation in overall preference range. The discounted extreme subject-vectors are R14 and R17 in the male group, and R81 and R82 in the female group.

The extent of the subjects' preference consensus range varies slightly. Rotherham indigenous females have a more varied preference judgement consensus than indigenous males. In both groups the proportion of the total subjects represented by the consensus is high (83% - 84%),

There is a large degree of similarity between the Rotherham indigenous male and female groups' average subject vector stimuli projection orders (see figure 3.4.8.9). However some differences occur in the middle preference range between stimulus points 2, 6 and 9. Along both groups' average vectors the three clusters of stimuli observed in earlier investigations are clearly discernable. Stimulus points 10, 7 and 8 make up the least-preferred cluster, points 2, 6 9 and 1 the middle preference cluster and points 3, 5 and 4 the most preferred cluster.

3.4.8.2 A Comparison of Results: Rotherham non-indigenous males with Rotherham non-indigenous females

Two dimensional MDPREF scaling is adequate for Rotherham non-indigenous male and female groups. Dimensions one and two represent 79% - 85% of the total data variance, see Table 3.4.8.

When the subject vector extremes are discounted the overall preference range becomes slightly less varied. Before and after extreme vector exclusion, Rotherham non-indigenous females demonstrate a slightly more varied overall preference range than non-indigenous males, see Table 3.4.8. The discounted extreme subject-vectors are R26 and R113 for the respective male and female groups.

The extent of the range covered by a concentration of subject-vector termini is virtually identical for both groups and the proportion of total subjects represented by the consensus is high (80% - 87%).

The Rotherham non-indigenous male and female groups' average subject-vector stimuli projection orders are similar (see figure 3.4.8.9). However, variations occur between stimulus points 2, 6 and 9, and points 5 and 3. Along both average vectors, the stimuli clusters observed in earlier investigations are clearly discernable.

3.4.8.3 A Comparison of Results: Slough indigenous males with Slough indigenous females

Two dimensional MDPREF scaling is adequate for Slough indigenous male and female groups. However dimension one represents only 54% and 50% of the total data variance for respective male and female groups (see Table 3.3.2.3).

The overall subject-vector termini preference range varies quite considerably between the two groups and when the vector extremes are discounted the variation increases, see Table 3.4.8. Slough indigenous females demonstrate a considerably more varied overall preference range than indigenous males. The discounted extreme vectors are S59, S117 and S120 in the male group and S16 and S43 in the female group.

Slough indigenous male residents have a more varied preference consensus than indigenous females and a larger proportion of the male group is represented by the preference consensus (70%). Only 48% of the indigenous females are included in the preference consensus range (see Table 3.4.8).

The Slough indigenous male and female groups' average subject-vector stimuli projection orders are similar (see figure 3.4.8.9), although variations occur between stimulus points 8 and 7 and points 1 and 9. The three clusters of stimuli observed in earlier investigations occur on only the Slough indigenous female average vector, but on this vector, stimulus point 3 appears with the middle preference range stimuli cluster instead of the most preferred stimuli cluster.

3.4.8.4 A Comparison of Results: Slough non-indigenous males with Slough non-indigenous females

Two dimensional MDPREF scaling is adequate for Slough non-indigenous male and female groups. However, dimension one represents only 58% and 55% of the total data variance in the respective male and female groups (see Table 3.3.2.3).

The overall subject-vector termini preference range varies quite considerably and remains large after the vector extremes are discounted, see Table 3.4.8. Slough non-indigenous females demonstrate a considerably more varied overall preference range than non-indigenous males including and excluding vector extremes. The discounted extreme vectors are S104 and S24 in the respective male and female groups.

The extent of the preference consensus range also varies, see Table 3.4.8. Slough non-indigenous female residents have a more varied preference judgement consensus than non-indigenous males; the proportion of the total subjects represented by the consensus is high (77% - 84%) for both groups.

The Slough non-indigenous male and female groups' average subject-vector stimuli projection orders are similar (see figure 3.4.8.9), although variations occur between stimulus points 6, 2, 9 and 1. The stimuli clusters observed in earlier investigations do not occur on either group's average subject-vector. Nevertheless on the non-indigenous female average vector, clusters do occur between stimulus points 7 and 8, points 6 and 9, and points 2, 1 and 3.

3.4.8.5 A Comparison of Results: Rotherham indigenous male and female groups with Rotherham non-indigenous male and female groups

The overall subject-vector preference range varies across the four groups before and after the vector extremes are discounted. Before exclusion the overall preference range varies from 119° to 209°, and after the extreme vectors are discounted, varies from 65° to 101°. Among the indigenous and non-indigenous groups, female groups have the most varied overall preference ranges. Across the four groups, the Rotherham indigenous female group has the most varied overall preference judgements and the Rotherham non-indigenous male group the least varied.

The extent of the preference consensus ranges vary little but in the indigenous and non-indigenous groups, females have the most varied preference consensus. In each of the four groups, the proportion of the total subjects represented by the consensus is high (80% - 87%).

There is a considerable degree of similarity across the four residents groups' average subject-vector stimuli projection orders and stimuli cluster formations (see figure 3.4.8.9).

3.4.8.6 A Comparison of Results: Slough indigenous male and female groups with Slough non-indigenous male and female groups

The overall subject-vector preference range varies across the four groups before and after vector extremes are discounted. It varies from 132^{0} to 251^{0} when extreme vectors are included, and from 50^{0} to 209^{0} when excluded. Female groups have the most varied overall preference ranges. Across the four groups, the Slough non-indigenous female group has the most varied overall preference judgements and Slough indigenous males the least varied.

The extent of the preference consensus ranges vary across the four age groups. Among the indigenous residents, males have the most varied overall preferences, but females have the most varied overall preferences among the non-indigenous residents. The proportion of the total subjects represented by the consensus is high (over 70%) for three of the four residents groups, but only 48% for the Slough indigenous female group.

There is some similarity across the four residents groups' average subject-vector stimuli projection orders but no similarity between the four average vectors stimuli cluster formations (see figure 3.4.8.9).

3.4.8.7 Investigation Results Summary

(i) Dimension one accounts for a considerably smaller proportion of the total data variance in the Slough residents group (50% - 58%) than in the Rotherham residents groups (68% - 77%).

(ii) In Rotherham and Slough indigenous and non-indigenous residents groups, female groups have more varied overall preference judgements than male groups.

(iii) Similarly, in Rotherham and Slough indigenous and non-indigenous residents groups, female groups have more varied preference consensus ranges than male groups, with one exception. Slough indigenous males have a more varied preference consensus than Slough indigenous females.

(iv) As in the preceding investigation, (3.4.7), when the indigenous and non-indigenous residents groups are directly compared, for each town, it can be seen that different types of residents groups demonstrate the most variation in overall preference and preference consensus ranges. For example in Rotherham, the <u>indigenous</u> female group has the most varied overall preference judgements, and <u>non-indigenous</u> males the least varied. In Slough however the <u>non-indigenous</u> female group has the most varied overall preference range and <u>indigenous</u> males the least varied.

(v) The proportion of the total subjects represented by the consensus area is high (over 70%) for all Rotherham and Slough indigenous and non-indigenous male and female groups, with one exception, Slough indigenous females (48%).

(vi) The average subject-vector stimuli projection orders are similar for each town's indigenous and non-indigenous male and female groups. Also the Rotherham groups' average vectors possess similar stimuli cluster formations (the same as those observed in earlier investigations), but the Slough groups' average vectors have no such clusters.

(vii) This investigation shows that with only one exception, female groups have the most varied overall preference and preference consensus ranges, irrespective of whether the female groups are indigen ous or non-indigenous. Therefore where as respondent sex appears to be an important influence on preference judgements, respondent birth place does not.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group represented by A
			(measured as degrees of a circle)			
50	Rotherham indigenous males	79	190	95	38	83
52	Rotherham indigenous females	76	209	101	50	84
51	Rotherham non-indigenous males	85	119	65	39	87
53	Rotherham non-indigenous females	79	141	80	40	80
54	Slough indigenous males	71	132	50	50	70
56	Slough indigenous females	65	192	124	20	48
55	Slough non-indigenous males	70	149	128	45	77
57	Slough non-indigenous females	66	251	209	79	84

<u>Table 3.4.8 MDPREF Summary of Rotherham and Slough Male and Female Indigenous and Non-Indigenous Respondent Groups</u>

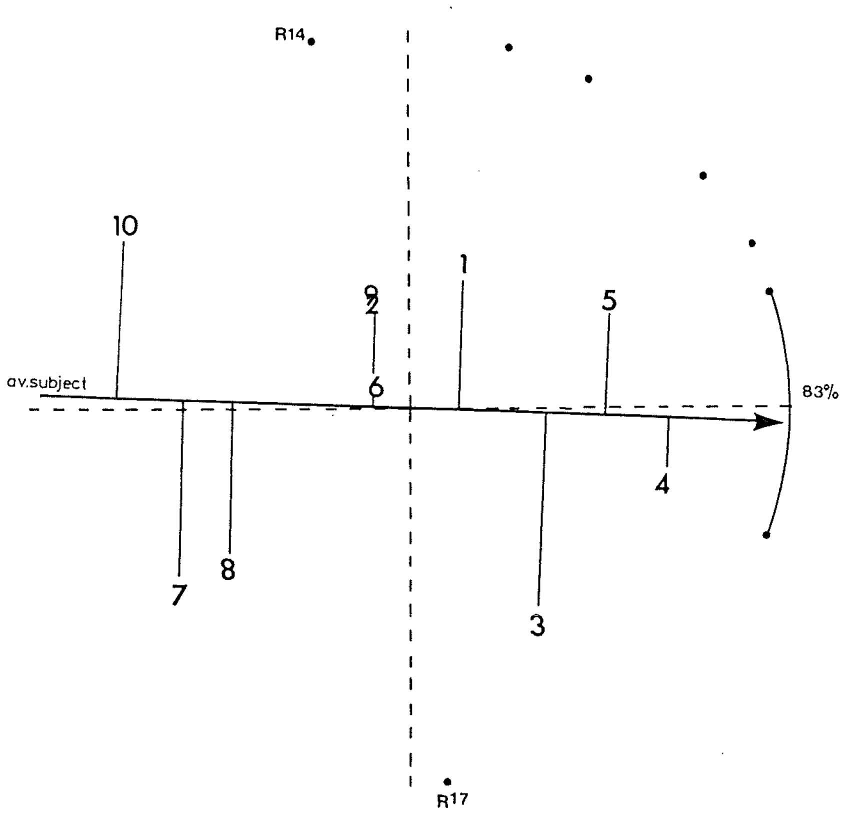


Fig.3.4.8.1 MDPREF 50 Configuration: Rotherham Indigenous Males

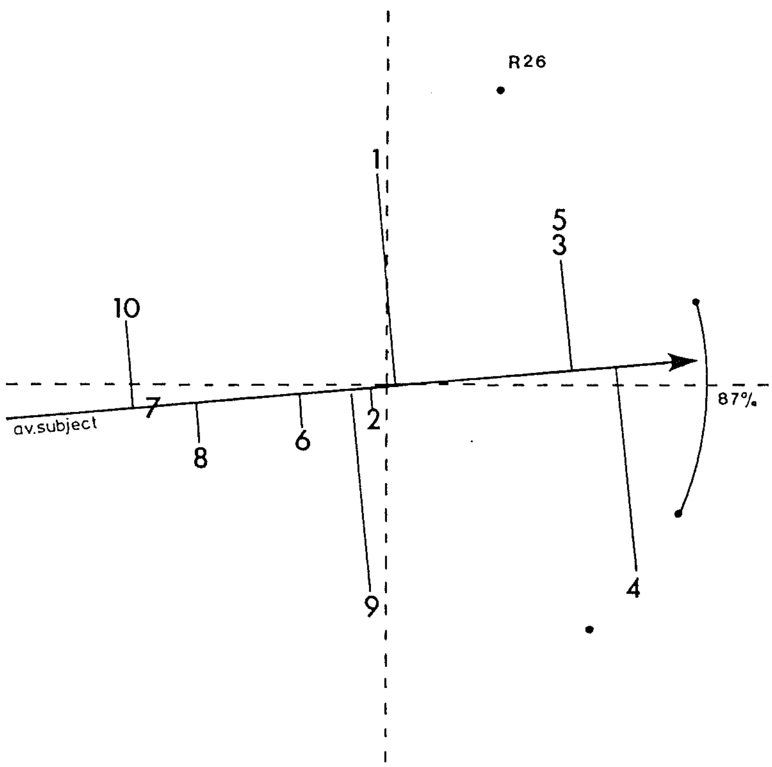


Fig.3.4.8.2 MDPREF 51 Configuration: Rotherham Non-Indigenous Males

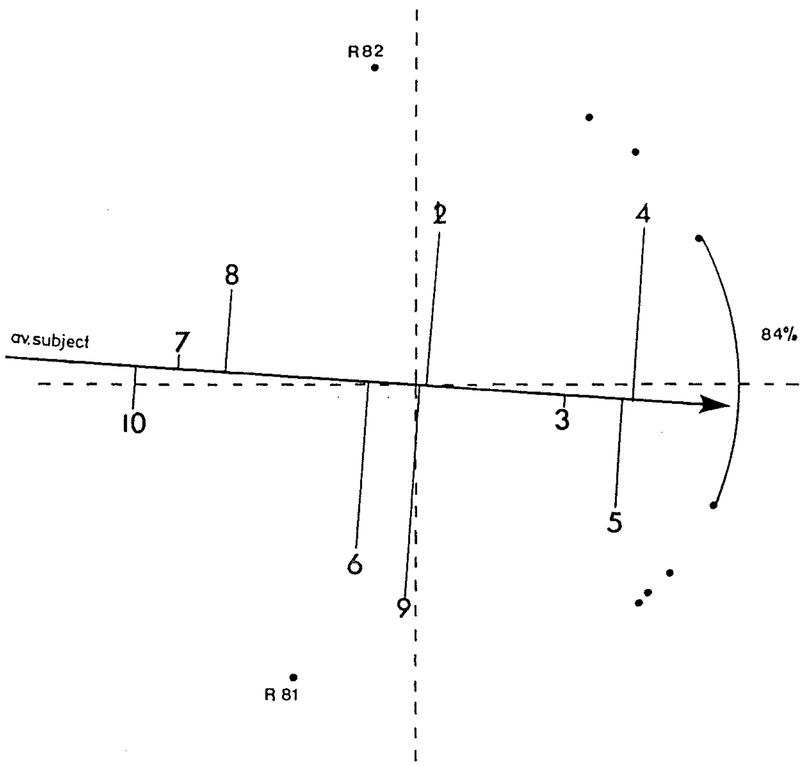


Fig.3.4.8.3 MDPREF 52 Configuration: Rotherham Indigenous Females

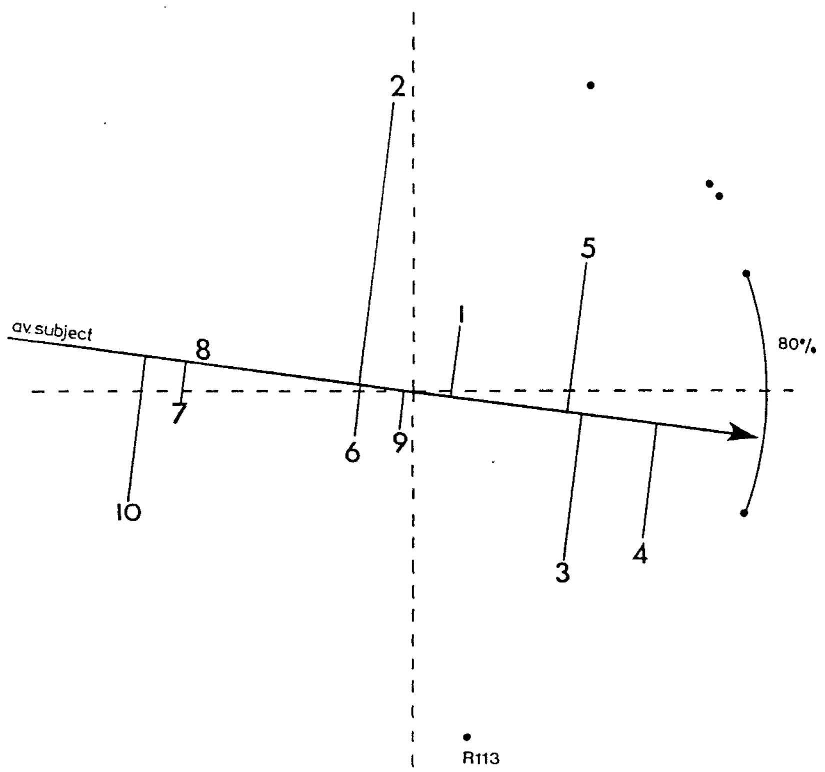


Fig.3.4.8.4 MDPREF 53 Configuration: Rotherham Non-Indigenous Females

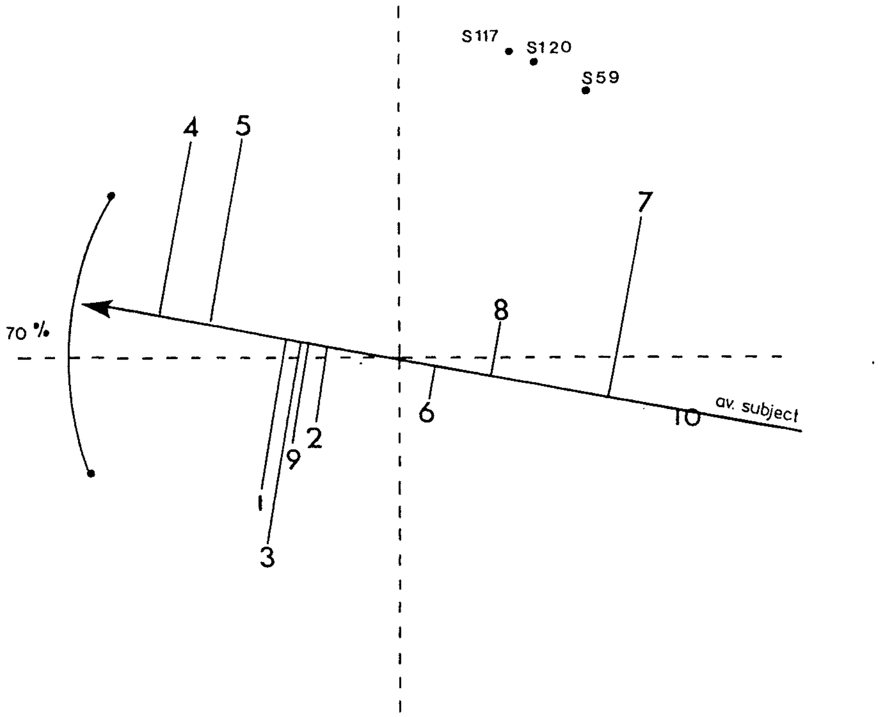


Fig.3.4.8.5 MDPREF 54 Configuration: Slough Indigenous Males

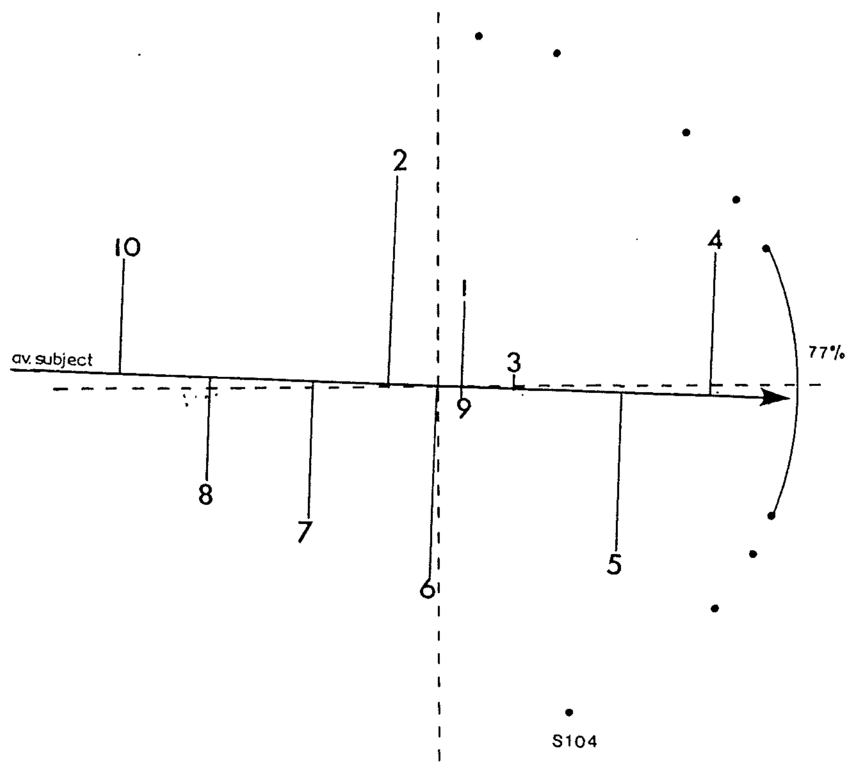


Fig.3.4.8.6 MDPREF 55 Configuration: Slough Non-Indigenous Males

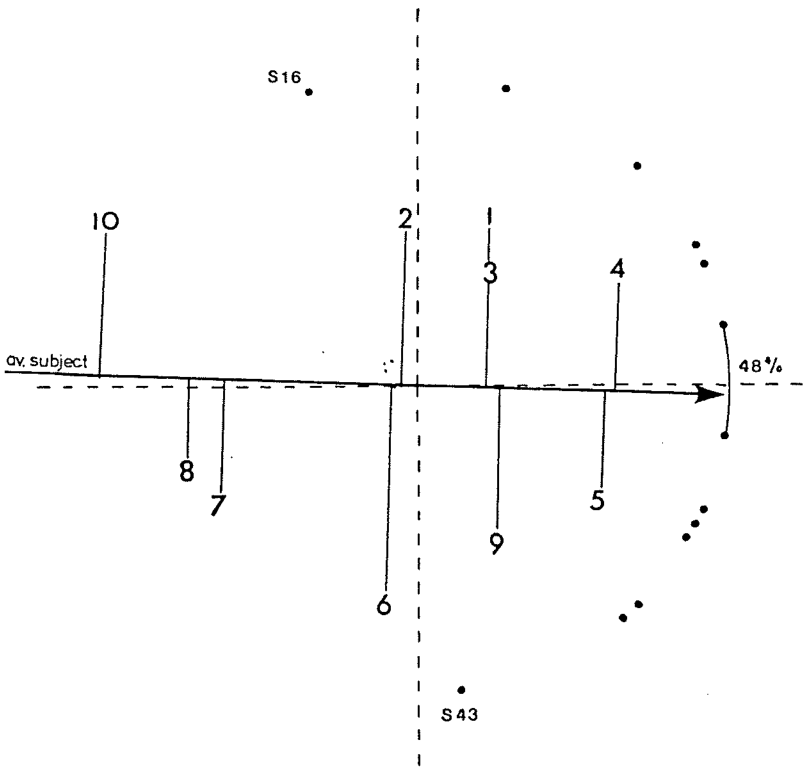


Fig.3.4.8.7 MDPREF 56 Configuration: Slough Indigenous Females

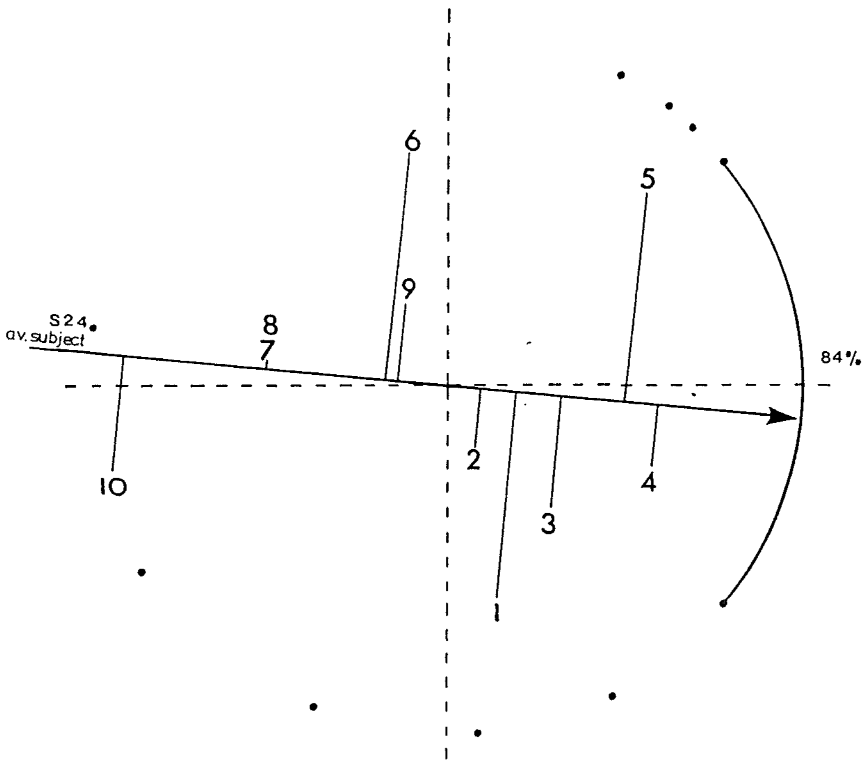


Fig.3.4.8.8 MDPREF 57 Configuration: Slough Non-Indigenous Females

Figure 3.4.8.9 Sex and Birth Place Effects

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
50	Rotherham indigenous males	10 7 8 2 9 6 1 3 5 4
52	Rotherham indigenous females	10 7 8 6 9 2 1 3 5 4
51	Rotherham non-indigenous males	10 7 8 6 921 3 5 4
53	Rotherham non-indigenous females	10 78 2 6 9 1 5 3 4
54	Slough indigenous males	10 7 8 6 2 9 3 1 5 4
56	Slough indigenous females	10 8 7 6 2 1 3 9 5 4
55	Slough non-indigenous males	10 8 7 2 6 19 3 5 4
57	Slough non-indigenous males	10 7 8 69 2 1 3 5 4

3.4.9 An Investigation Of The Effect Of Time On Non-Indigenous Residents'Preference Judgements

It is possible that non-indigenous residents' length of residence in Rotherham or Slough might influence preference judgements, particularly those related to local environmental stimuli. It is the purpose of this inquiry to determine the effect of differing periods of residence on Rotherham and Slough non-indigenous residents' preference judgements.

This investigation refers to programmes:

MDPREF 58. - Rotherham non-indigenous residents of 2-5 years (figure 3.4.9.1).

MDPREF 59. - Rotherham non-indigenous residents of 16-30 years (figure 3.4.9.2)

MDPREF 60. - Rotherham non-indigenous residents of 31+ years (figure 3.4.9.3)

MDPREF 61. - Slough non-indigenous residents of 1-12 months (figure 3.4.9.4)

MDPREF 62. - Slough non-indigenous residents of 13-23 months (figure 3.4.9.5)

MDPREF 63. - Slough non-indigenous residents of 2-5 years (figure 3.4.9.6)

MDPREF 64. - Slough non-indigenous residents of 6-15 years (figure 3.4.9.7)

MDPREF 65. - Slough non-indigenous residents of 16-30 years (figure 3.4.9.8)

MDPREF 66. - Slough non-indigenous residents of 31+ years (figure 3.4.9.9)

The MDPREF programme configurations analysed are depicted in the figures specified overleaf.

3.4.9.1 A Comparison of Results: all Rotherham non-indigenous groups with differing periods of residence in Rotherham

Two dimensional MDPREF scaling is adequate for all three Rotherham non-indigenous residents groups. Dimensions one and two represent 79% - 99% of the total data variance, see Table 3.4.9.

The overall subject-vector termini preference range varies considerably across the three groups but becomes more limited when the extreme vectors are discounted; see Table 3.4.9.

Rotherham non-indigenous residents of 16-30 years exhibit a more varied overall preference range than the other residents' groups. However, the variation does not appear to follow any particular pattern, for example it does not increase as the groups become more established residents of Rotherham. Subject-vector extremes are discounted from only one group, non-indigenous residents of 31 or more years. The discounted extreme vectors are R26 and R113.

The extent of the subjects preference consensus range varies only slightly across the three groups: Non-indigenous residents of 31 or more years and 2-5 years of residence have slightly more varied ranges than residents of 16-30 years, but still no pattern emerges within the results set to link the groups' differing periods of residence with preference consensus range variations. The proportion of the total subjects represented by the consensus is high (71% - 100%) in each group, see Table 3.4.9.

The average subject vector stimuli projection orders are similar for the two longest established residents groups, residents of 16-30 years and 31 or more years, but the least established groups' average vector stimuli projection order differs considerably (see figure 3.4.9.10). Along this average vector, stimulus point 3 appears with the middle preference range stimuli cluster, and stimulus point 2 with the most preferred stimuli cluster. The clusters observed in earlier investigations are clearly discernable on only the longer established residents groups' average vectors (residents of 16-30 years and 31 or more years residence).

3.4.9.2 A Comparison of Results: all Slough non-indigenous groups with differing periods of residence in Slough

Two dimensional scaling is adequate for all six Slough non-indigenous residents groups representing 65% - 99% of the total data variance. Groups with residence periods of 2-5 years, 6-15 years and 16-30 years have low dimension one scores (50% - 56%) but comparatively large dimension two scores (14% - 24%), see Table 3.3.2.3.

The overall subject-vector termini preference range varies considerably across the groups from 45° to 243°. The variation does not appear to follow any particular pattern; the preference variation does not decrease in range as the groups become more established residents of Slough. Similarly, when the subject-vector extremes are discounted, the groups' overall range of preference variation becomes more limited (45° - 195°), but no patterns emerge within the results set to link the groups' length of residence with preference judgement variations, see Table 3.4.9.

Slough non-indigenous residents of 2-5 years exhibit the most varied overall preference range. The discounted extreme vectors are: S10 and S35 in the 16-15 years residence group; S31, S111 and S104 in the 16-30 years group, and S24 and S110 in the 31 or more years of residence group.

The extent of the range covered by a concentration of subject-vector termini varies. Slough residents of 2-5 years residence have the most varied consensus, but again there is no definite pattern to link the groups' differing periods of residence with preference consensus range variations. The proportion of residents represented by the consensus is high for all groups (82% - 100%), with one exception; only 50% Slough non-indigenous residents of 6-15 years are represented by the preference consensus raise, see Table 3.4.9.

The groups' average subject-vector stimuli projection orders differ quite considerably. The stimuli clusters observed in earlier investigations occur along only one average vector, non-indigenous residents of 16-30 years residence but stimulus point 3 appears with the middle preference range stimuli cluster instead of the most preferred stimuli cluster (see figure 3.4.9.10)

3.4.9.3 <u>Investigation Results Summary</u>

(i) Two dimensional MDPREF scaling is adequate for all Rotherham and Slough non-indigenous groups of differing periods of residence. It represents 65% - 99% of the total data variance.

(ii) The overall preference ranges vary across both the Rotherham and Slough non-indigenous resident groups. In neither case do any patterns emerge to link the groups' differing periods of residence with overall preference range variations.

(iii) Similarly, the preference consensus ranges vary across both the Rotherham and Slough non-indigenous residents groups. In neither case do any patterns emerge to suggest a relationship between the groups' differing periods of residence and preference consensus range variations.

(iv) In both towns, the groups' average subject-vector stimuli projection orders differ but some similarities exist between the two longest Rotherham residents' groups. The stimuli clusters observed in earlier investigations are discernable only on these two average vectors.

(v) The results of this investigation reveal that preference judgements are unaffected in any systematic way by the differing periods of residence of non-indigenous residents groups.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes (measured as degrees of a circle)	Overall pref. range excluding vector extremes (measured as degrees of a circle)	Preference consensus range (A)	% of group repre-sented by A
58	Rotherham non-indigenous residents of 2-5 yrs	99	43	43	43	100
59	Rotherham non-indigenous residents of 16-30 yrs	84	70	70	36	71
60	Rotherham non-indigenous residents of 31+ yrs	79	146	45	45	92
61	Slough non-indigenous residents of 1-12 months	99	45	45	45	100
62	Slough non-indigenous residents of 13-23 months	91	81	81	81	100
63	Slough non-indigenous residents of 2-5 yrs	79	195	195	195	100
64	Slough non-indigenous residents of 6-15 yrs	70	135	50	50	82
65	Slough non-indigenous residents of 16-30 yrs	65	164	94	23	50
66	Slough non-indigenous residents of 31+ yrs	72	243	128	55	84

Table 3.4.9 MDPREF Summary of Rotherham and Slough Non-Indigenous Residence Groups

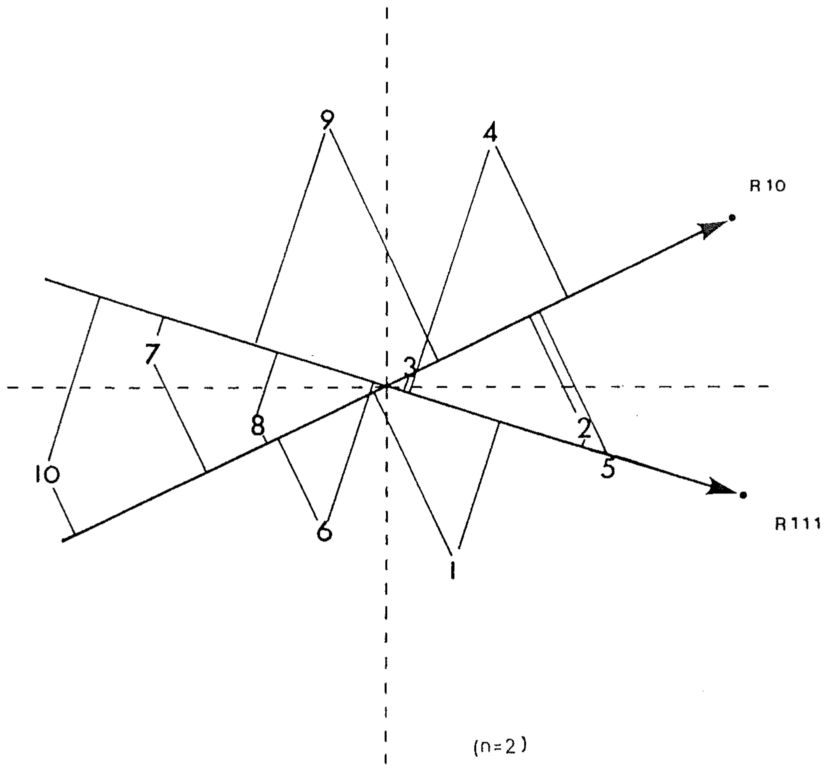


Fig.3.4.9.1 MDPREF 58 Configuration: Rotherham Non-Indigenous Residents of 2-5 years

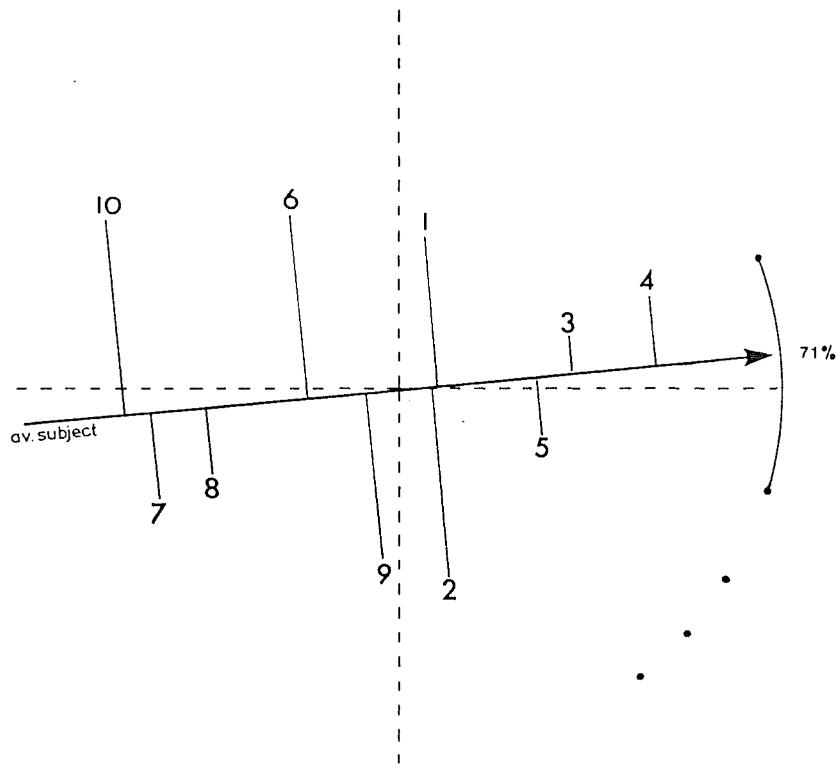


Fig.3.4.9.2 MDPREF 59 Configuration: Rotherham Non-Indigenous Residents of 16-30 years

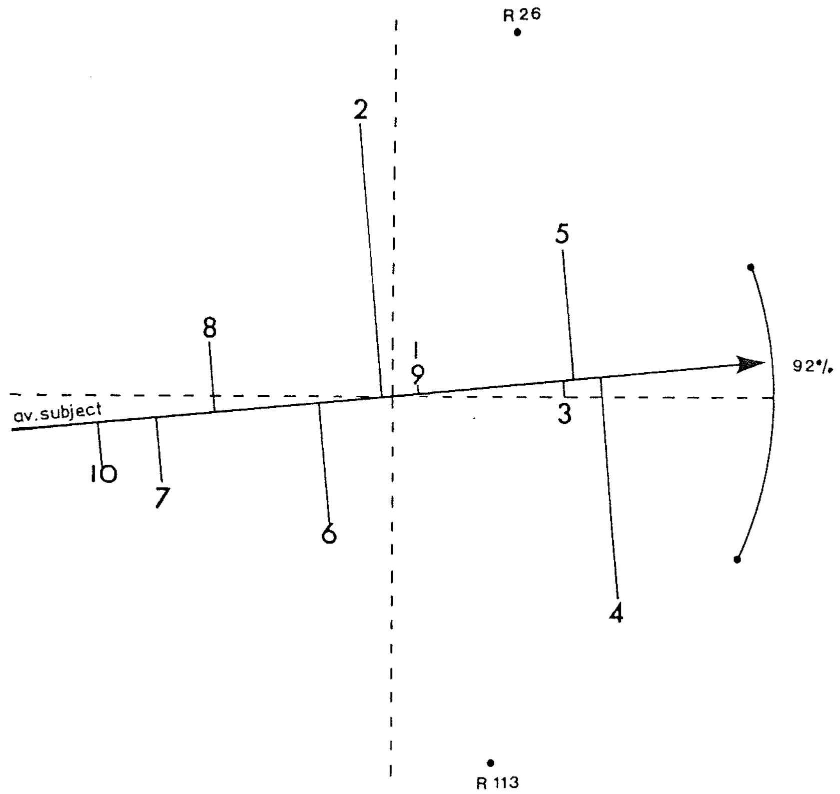


Fig.3.4.9.3 MDPREF 60 Configuration: Rotherham Non-Indigenous Residents of 31 years and over

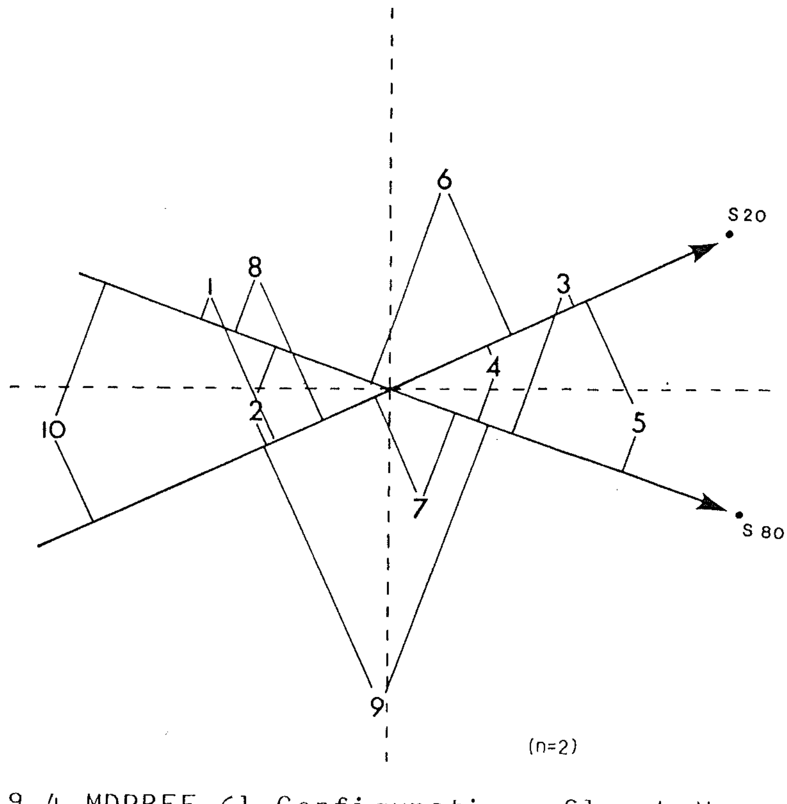


Fig.3.4.9.4 MDPREF 61 Configuration: Slough Non-Indigenous Residents of 1-12 months

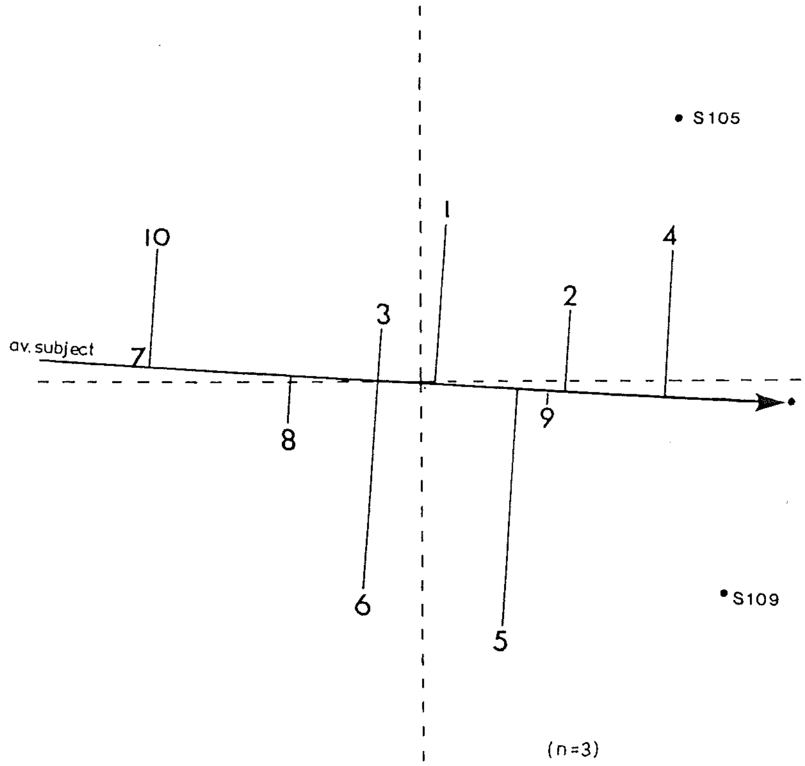


Fig.3.4.9.5 MDPREF 62 Configuration: Slough Non-Indigenous Residents of 13-24 months

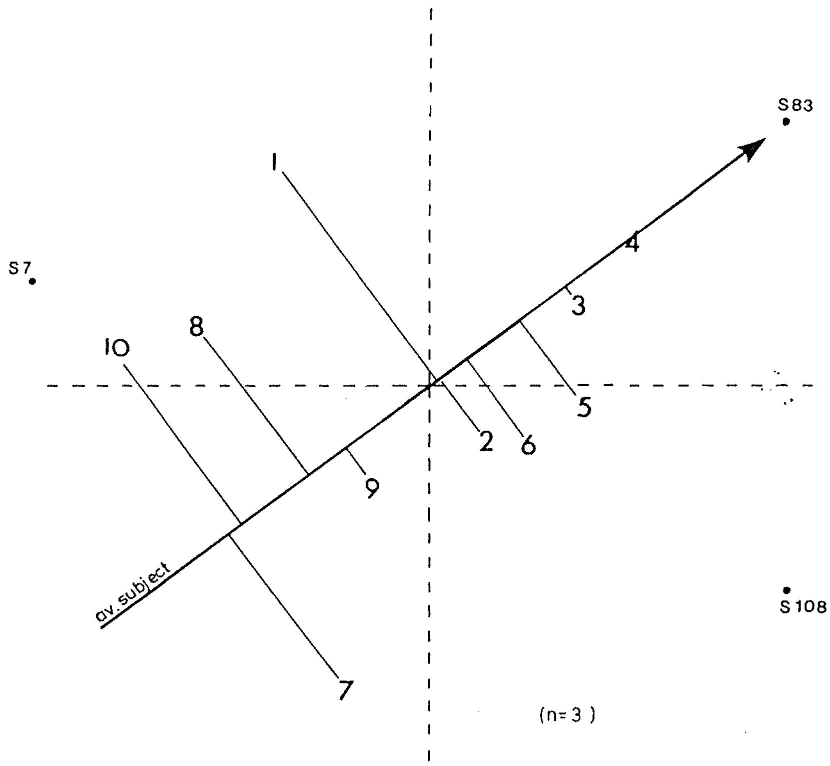


Fig.3.4.9.6 MDPREF 63 Configuration: Slough Non-Indigenous Residents of 2-5 years

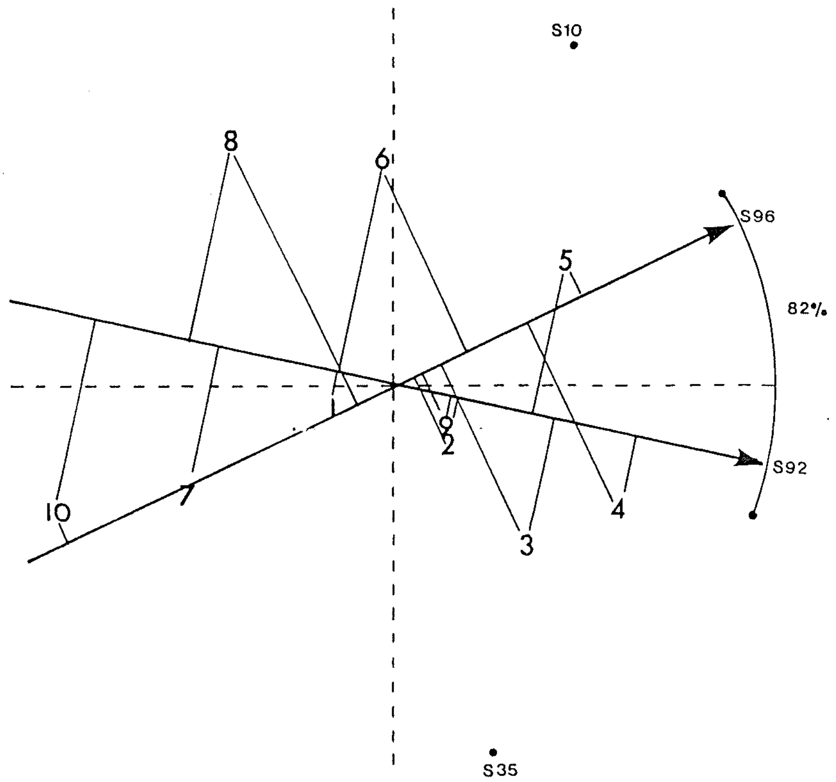


Fig.3.4.9.7 MDPREF 64 Configuration: Slough Non-Indigenous Residents of 6-15 years

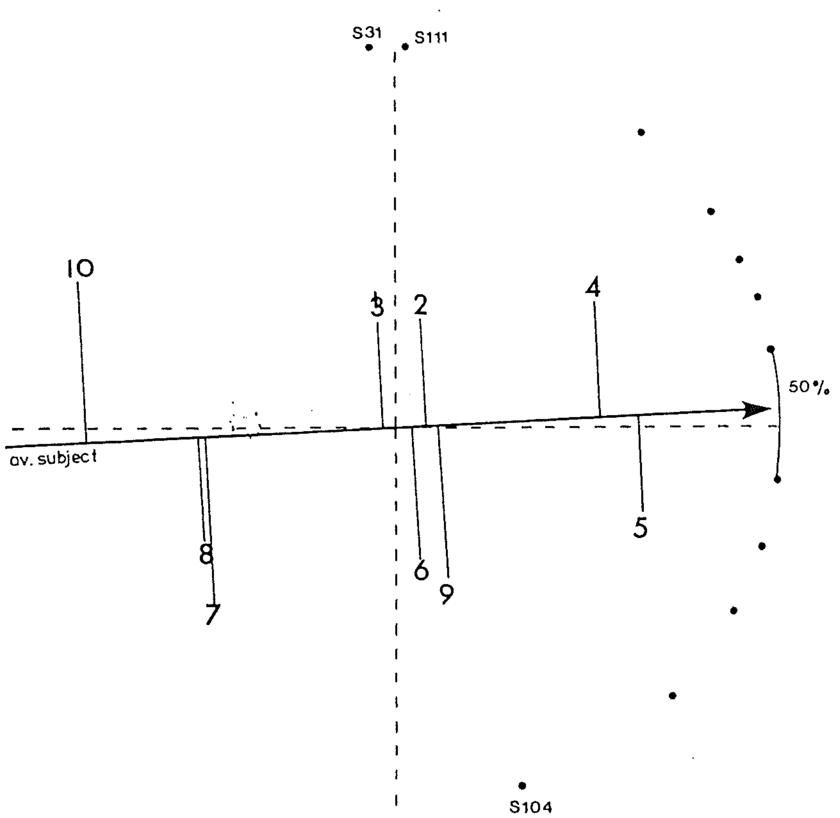


Fig.3.4.9.8 MDPREF 65 Configuration: Slough Non-Indigenous Residents of 16-30 years

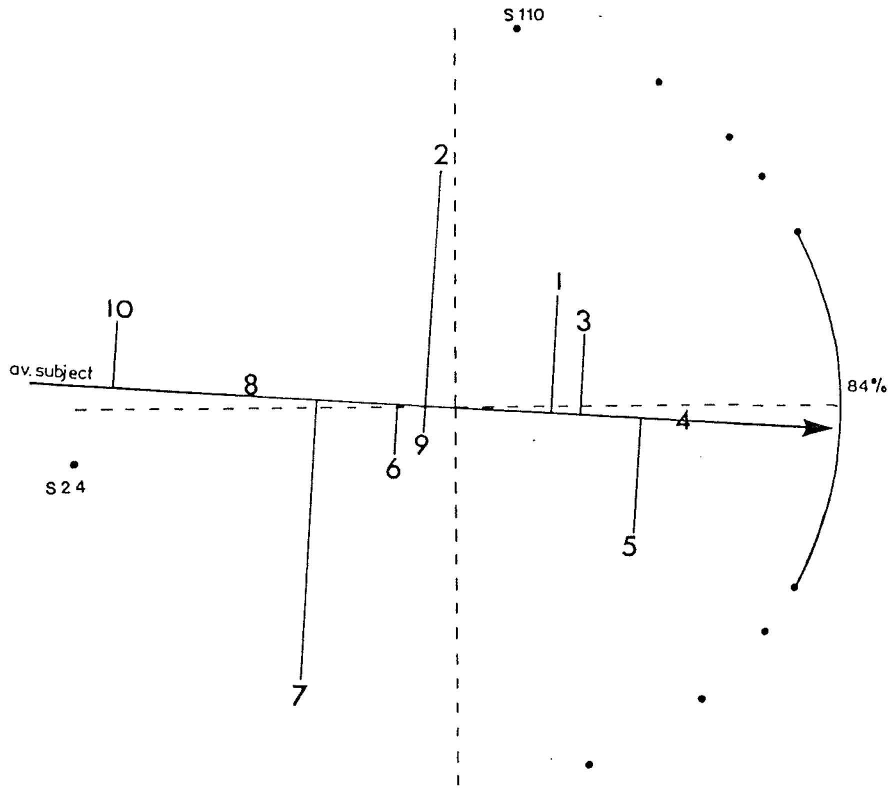


Fig.3.4.9.9 MDPREF 66 Configuration: Slough Non-Indigenous Residents of 31 years and over

Figure 3.4.9.10 Effect of Differing Periods of Residence of Non-Indigenous Respondents' Preferences Stimuli Projections (preference direction ⟶)

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction ⟶)
58	Rotherham non-indigenous residents of 2-5 yrs	10 7 8 6 1 3 9 2/5 4
59	Rotherham non-indigenous residents of 16-30 yrs	10 7 8 6 9 1/2 5 3 4
60	Rotherham non-indigenous residents of 31 yrs or more	10 7 8 6 2 9/1 3 5 4
61	Slough non-indigenous residents of 1-12 months	10 9 2 1 8 7 4 6 3 5
62	Slough non-indigenous residents of 13-24 months	7 10 8 6 3 1 5 9 2 4
63	Slough non-indigenous residents of 2-5 yrs	7 10 8 9 1/2 6 5 3 4
64	Slough non-indigenous residents of 6-15 yrs	10 8 7 6 1 9 2 5 3 4
65	Slough non-indigenous residents of 16-30 yrs	10 8/7 3/1 6 2 9 4 5
66	Slough non-indigenous residents of 31 yrs or more	10 8 7 6 9/2 1 3 5 4

3.4.10 An Investigation Of The Effect Of Socio-Economic Grouping On Preference Judgements

Variation patterns in the results set are sought throughout the different socio-economic resident groups to support the assumption that socio-economic status affects preference judgements.

Respondents were classified according to the following:
H.M.S.O. Socio-economic group categories:

SEG 5-1 and SEG 1-2	-	Social Class 2
SEG 5-2 and SEG 8	-	Social Class 3 (supervisory)
SEG 6 and SEG 12	-	Social Class 3 (non-manual but not supervisory)
SEG 9	-	Social Class 3 (manual)
SEG 7 and SEG 10	-	Social Class 4
SEG 11	-	Social Class 5

This investigation refers to programmes:
MDPREF 67. - Residents in SEG 11 (figure 3.4.10.1)
MDPREF 68. - Residents in SEG 7 and SEG 10 (figure 3.4.10.2)
MDPREF 69. - Residents in SEG 9 (figure 3.4.10.3)
MDPREF 70. - Residents in SEG 6 and SEG 12 (figure 3.4.10.4)
MDPREF 71. - Residents in SEG 5-2 and SEG 8 (figure 3.4.10.5)
MDPREF 72. - Residents in SEG 5-1 and SEG 1-2 (figure 3.4.10.6)

The MDPREF programme configurations analysed are depicted in the figures specified above.

3.4.10.1 A Comparison of Results: all six resident socio-economic groups

Two dimensional MDPREF scaling is adequate for all six socio-economic groups (SEG). It represents 66% - 82% of the total data variance (see Table 3.4.10). However, in SEG 11 and SEG 6/12 dimension one accounts for only 55% and 54% of the total data variance, compared with dimension one scores exceeding 63% in the four other socio-economic groupings (see Table 3.3.2.4)

The overall subject-vector termini preference range varies quite considerably across the different socio-economic groups but when the vector extremes are discounted the variation is more limited, see Table 3.4.10.
Before and after extreme vector exclusion, SEG 6/12 exhibits the most varied overall preference judgements and SEG 5-2/1-2 the least varied. The discounted vector extremes are S7 and S111 in SEG 6/12, S16 in SEG 11, and S59, S117, S120, R14 and R81 in SEG 9.

The most varied preference consensus is found among residents in SEG 7/10 and the least varied in SEG 5-1/1-2 residents. The proportion of the total subjects represented by the consensus is high (68% - 86%) for all but one socio-economic group; only half of the residents in SEG 5-1/1-2 are represented by the preference consensus range.

The socio-economic groups average subject-vector stimuli projection orders are very similar, with one exception (see figure 3.4.10.7). The SEG 5-1/1-2 average vector stimuli projection order differs from the rest in respect of stimulus points 6 and 9, and points 1 and 2. Also along this average vector stimulus point 7 is preferred to The stimuli clusters observed in earlier investigations occur along two of the groups' average vectors, for SEG 9 and SEG 5-1/1-2. On the other average vectors the characteristic clusters of least, middle and most preferred stimuli do not occur.

3.4.10.2 <u>Investigation Summary</u>

(i) Two dimensional MDPREF scaling is adequate for the six socio-economic groups.

(ii) Residents in SEG 6/12 demonstrate the most varied preference judgements and SEG 5-1/1-2 residents the least varied.

(iii) Higher socio-economic groups tend to have more varied preference consensus ranges (namely SEG 6/12 SEG 5-2/8 and SEG 5-1/1-2) and lower socio-economic groups tend to have the least varied preference consensus ranges (SEG 11, SEG 9 and SEG 7/10).

(iv) Stimuli projection orders along the average subject vectors are similar, but only two socio-economic groups possess similar stimuli clusters.

(v) Analysis of this results set does suggest that there is some relationship between residents' socio-economic status and preference judgements. For example, the higher socio-economic groups, SEG 5-2/8 and SEG 5-1/1-2 possess the least varied overall preference judgements and consensus ranges. This investigation does not determine the extent of the influence of residents' socio-economic status on preference judgements but the subsequent inquiry should help clarify this situation.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
67	All respondents in SEG 11	69	227	110	63	80
68	All respondents in SEG 7 & SEG 10	73	152	152	70	86
69	All respondents in SEG 9	71	290	150	67	83
70	All respondents in SEG 6 & SEG 12	66	360	196	50	68
71	All respondents in SEG 5-2 & SEG 8	81	70	70	41	83
72	All respondents in SEG 5-1 & SEG 1-2	82	62	62	7	50

<u>Table 3.4.10 MDPREF Summary of Socio-Economic Respondent Groups</u>

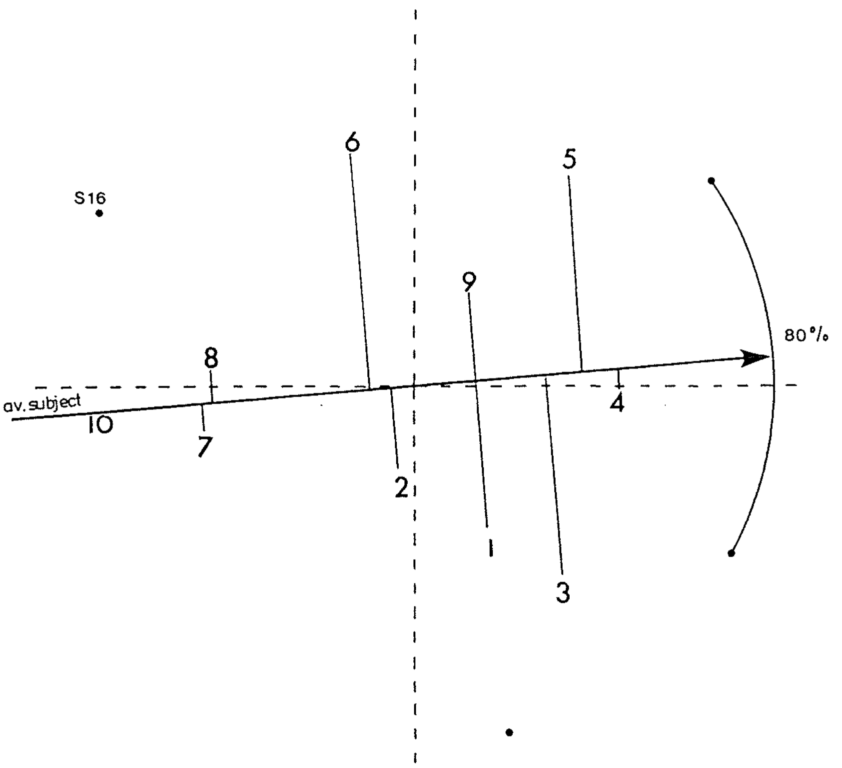


Fig.3.4.10.1 MDPREF 67 Configuration: All Respondents in Socio-Economic Group 11

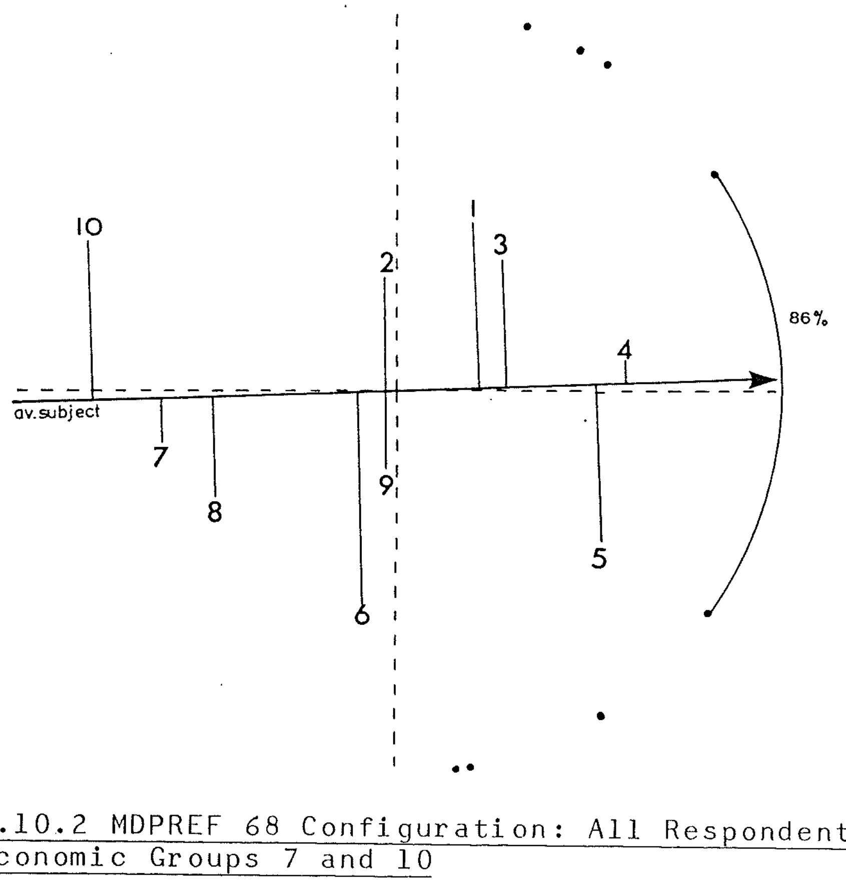


Fig.3.4.10.2 MDPREF 68 Configuration: All Respondents in Socio-Economic Groups 7 and 10

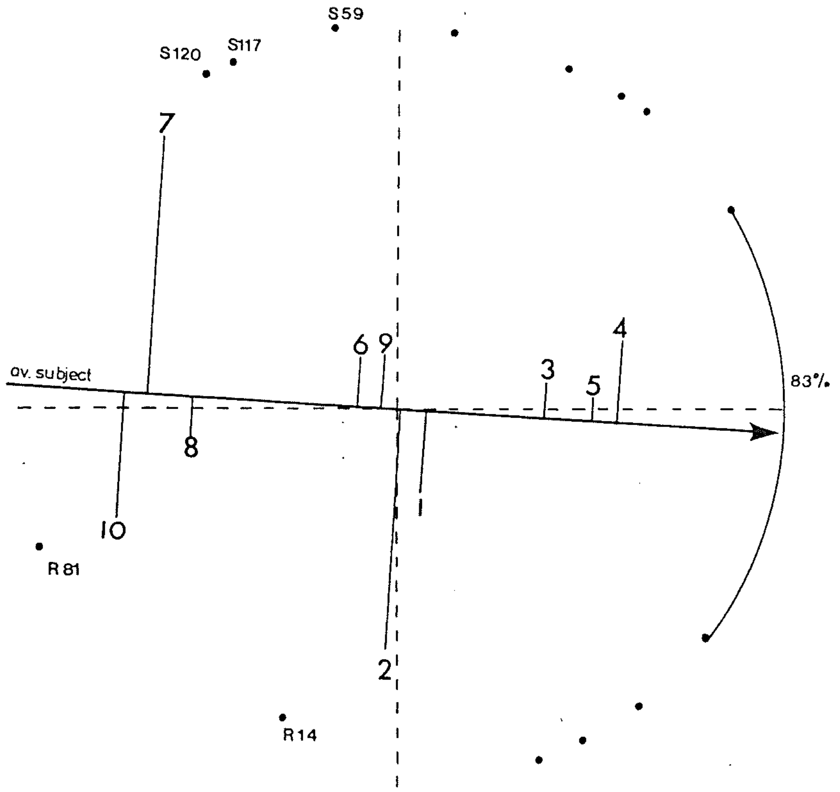


Fig.3.4.10.3 MDPREF 69 Configuration: All Respondents in Socio-Economic Group 9

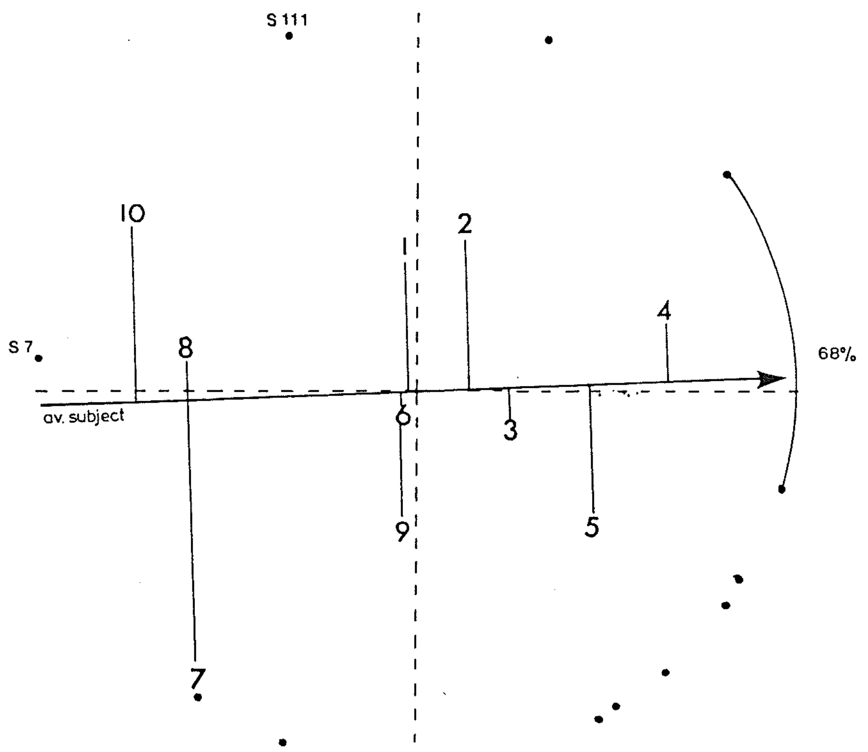


Fig.3.4.10.4 MDPREF 70 Configuration: All Respondents in Socio-Economic Groups 6 and 12

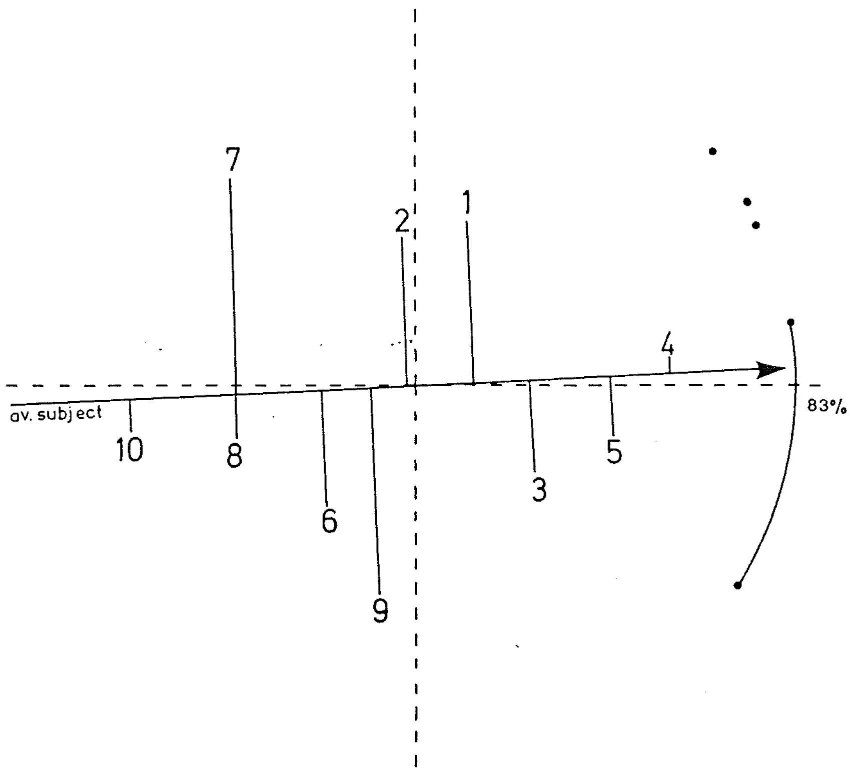


Fig.3.4.10.5 MDPREF 71 Configuration: All Respondents in Socio-Economic Groups 5-2 and 8

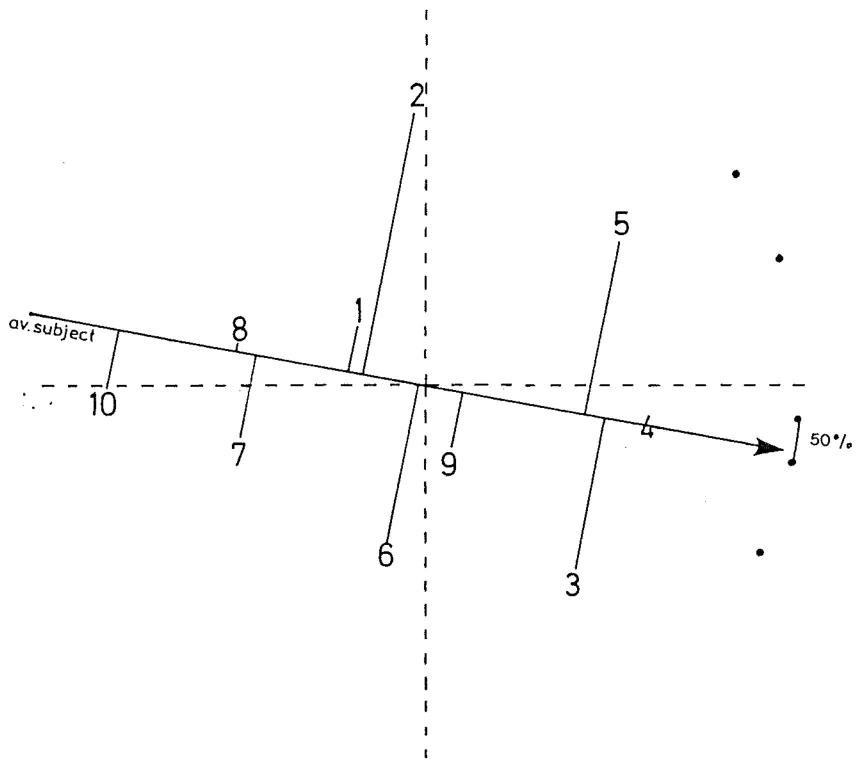


Fig.3.4.10.6 MDPREF 72 Configuration: All Respondents in Socio-Economic Groups 5-1 and 1-2

Figure 3.4.10.7 Socio-Economic Status Effect

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
67	All respondents in SEG 11	10 7 8 6 2 9 1 3 5 4
68	All respondents in SEG 7 & 10	10 7 8 6 9 2 1 3 5 4
69	All respondents in SEG 9	10 7 8 6 9 2 1 3 5 4
70	All respondents in SEG 6 & 12	10 8 7 1 6 9 2 3 5 4
71	All respondents in SEG 5-2 & 8	10 8 7 6 9 2 1 3 5 4
72	All respondents in SEG 5-1 & 1-2	10 8 7 1 2 6 9 5 3 4

3.4.11 An Investigation Of The Effect Of Socio-Economic Status On Rotherham And Slough Residents' Preference Judgements

In the preceding investigation, there appears to be some form of relationship between socio-economic status and preference judgements. With the highest socio-economic having the least varied overall preference and consensus ranges and the lowest socio-economic groups the greatest preference variation. This investigation attempts to discover whether the different towns' socio-economic groups produce similar or dissimilar preference judgements. In addition, should the earlier inquiry's preference variation pattern be replicated or modified in this investigation, it might then be possible to draw some conclusions regarding the extent and nature of the socio-economic status influence on preference judgements.

This investigation refers to programmes:

MDPREF 73. - Rotherham residents in SEG 11 (figure 3.4.11.1)

MDPREF 74. - Slough residents in SEG 11 (figure 3.4.11.2)

MDPREF 75. - Rotherham residents in SEG 7 and SEG 10 (figure 3.4.11.3)

MDPREF 76. - Slough residents in SEG 7 and SEG 10 (figure 3.4.11.4)

MDPREF 77. - Rotherham residents in SEG 9 (figure 3.4.11.5)

MDPREF 78. - Slough residents in SEG 9 (figure 3.4.11.6)

MDPREF 79. - Rotherham residents in SEG 6 and SEG 12 (figure 3.4.11.7)

MDPREF 80. - Slough residents in SEG 6 and SEG 12 (figure 3.4.11.8)

MDPREF 81. - Rotherham residents in SEG 5-2 and SEG 8 (figure 3.4.11.9)

MDPREF 82. - Slough residents in SEG 5-2 and SEG 8 (figure 3.4.11.10)

MDPREF 83. - Rotherham residents in SEG 5-1 and SEG 1-2 (figure 3.4.11.11)

MDPREF 84. - Slough residents in SEG 5-1 and SEG 1-2 (figure 3.4.11.12)

The MDPREF programmes analysed are depicted in the figures specified above.

3.4.11.1 A Comparison of Results: all six Rotherham residents socio-economic groups with the six Slough socio-economic groups

Two dimensional MDPREF scaling is adequate for all Rotherham socio-economic groups, representing 78% - 88% of the total data variance. Two dimensional scaling is also adequate for all Slough socio-economic groups, representing 60% - 99% of the total data variance (see Table 3.4.11.1). However dimension one scores are quite low for three of the Slough socio-economic groups, 52% for SEG 9, 45% for SEG 6/12 and 44% for SEG 11 (see Table 3.3.2.4).

The overall subject-vector termini preference range varies considerably across the different towns' socio-economic groups but when the sector extremes are discounted, the variation is more limited, see Table 3.4.11.1.

In the Rotherham results SEG 7/10 exhibits the most varied overall preference judgements and among Slough residents SEG 6/12 have the most varied overall preferences. Different socio-economic groups in the two towns also possess the least varied preference ranges; in Rotherham SEG 6/12 and in Slough SEG 5-1/1-2. The discounted extreme vectors are: R82 and R104 in Rotherham SEG 6/12, R14, R81 and R113 in Rotherham SEG 9, S16 in Slough SEG 11, S105 in Slough SEG 9; and S7 and S26 in Slough SEG 6/12 see Table 3.4.11.1.

Rotherham SEG	Overall preference range excluding vector extremes	Slough SEG	Overall preference range excluding vector extremes
7/10	127^{0}	7/10	105^{0}
9	99^{0}	6/12	153^{0}
11	87^{0}	9	135^{0}
5-1/1-2	74^{0}	11	89^{0}
5-2/8	56^{0}	5-2/8	80^{0}
6/12	37^{0}	5-1/2	58^{0}

Table 3.4.11.2 Ranked order of extreme vector excluded preference ranges for Rotherham and Slough socio-economic groups

When the overall preference ranges (extremes included) are ranked according to size (see Table 3.4.11.2), the rank order is very similar for Rotherham and Slough, with only two exceptions. In the Rotherham results, SEG 6/12 has the least varied preference range but in the Slough results, this SEG(6/12)has the second most varied preference range. The ranked position order of SEG 5-2/8 and SEG 5-1/1-2 are reversed in the Rotherham and Slough results. As for the similarities, SEG 7/10 has the most varied preference judgement range, followed by SEG 9, SEG 11 and SEG 5-2/8 or SEG 5-1/1-2 in the results for both Rotherham and Slough. Despite these similarities there is no evidence to support the assumption that higher socio-economic groups have more or less varied preferences than lower socio-economic groups. However the similarities in the ranked preference variation orders imply that socio-economic status has some effect upon preference judgements but the nature and extent of the relationship is not apparent.

The extent of the range covered by a concentration of subject vector termini varies throughout the Rotherham and Slough socio-economic groups. The variation is however, more restricted in the Rotherham groups than it is in the Slough groups, see Table 3.4.11.3.

Rotherham SEG	Preference consensus range	Slough SEG	Preference consensus range
11	48^{o}	7/10	72^{o}
6/12	37^{o}	11	52^{o}
9	36^{o}	6/12	35^{o}
5-2/8	27^{o}	5-2/8	35^{o}
5-1/1-2	25^{o}	9	34^{o}
7/10	21^{o}	5-1/1-2	8^{o}

Table 3.4.11.3 Ranked order of preference consensus ranges for Rotherham and Slough socio-economic groups

The ranked order of preference consensus ranges (Table 3.4.11.3) are quite dissimilar for the Rotherham and Slough socio-economic groups. Among Rotherham residents, SEG 11 has the most varied preference consensus and SEG 7/10 the least varied but among Slough residents, SEG 7/10 has the most varied preference consensus and SEG 5-1/1-2 the least varied.

The proportion of the groups' total subjects represented by the consensus ranges varies (see Table 3.4.11.1). Throughout the Rotherham groups, it varies from 60% - 86%, but for the Slough socio-economic groups it varies from 50% - 88%. In SEG 5-2/8 and SEG 9 the preference consensus ranges represent only 50% and 59% of the groups' total subjects.

There is a greater degree of similarity between the Rotherham socio-economic groups' average subject vectors stimuli projection order than there is between the Slough socio-economic groups average vector projections (see figures 3.4.11.13 and 3.4.11.14). Most of the differences in stimuli orders occur in the middle preference stimuli range, between stimulus points 2, 6, 9 and 1. On the Rotherham groups average vectors stimulus point 8 is usually preferred to point 7, but on the Slough average vectors, stimulus point 7 is more preferable than point 8. The order of the most preferred stimuli, points 3, 5 and 4 is more consistent on Rotherham groups' average vectors than on the Slough average vectors. Stimuli clusters occur between the least preferred stimulus points, 10, 8 and 7 on the Rotherham and Slough groups' average vectors. Within these clusters, stimulus points 7 and 8 lie close together on all but two average vectors; the average vectors for Slough SEG 5-2/8 and Rotherham SEG 7/10. The stimuli clusters observed in earlier investigations occur along three Slough average vectors (SEG 7/10, SEG 9 and SEG 6/12) and two Rotherham average vectors (SEG 9 and SEG 6/12).

3.4.11.2 Comparison of Results: Rotherham residents in SEG 11 with Slough residents in SEG 11

The overall subject-vector preference ranges of the two groups vary considerably before the extreme vectors are discounted but have almost identical preference judgement ranges (87^{o} and 89^{o}) after the vectors are discounted, see Table 3.4.11.1.

In both groups, a large proportion of the total subjects is represented by the consensus of subjects' preferences (75% - 86%) and the extent of the consensus range varies only slightly between the two groups. Slough SEG 11 residents possess a slightly more varied preference consensus (52^{o}) than Rotherham SEG 11 residents (48^{o}).

The order of the five least-preferred stimuli projections along the groups' average vectors is very similar, but the five most-preferred stimuli are dissimilar in order (see figure 3.5.11.13). Only one stimuli cluster exists on the Rotherham and Slough average vectors, the least preferred stimulus points 10, 8 and 7 form this cluster.

3.4.11.3 Comparison of Results: Rotherham residents in SEG 7/10 with Slough residents in SEG 7/10

The overall subject vector preference ranges contain no vector extremes but vary between the two groups; Rotherham residents in SEG 7/10 have a more varied preference range (127^{o}) than Slough residents in SEG 7/10 (105^{o}), see Table 3.4.11.1.

In both groups, a large proportion of the total subjects is represented by the consensus of subjects preferences (64% - 88%). The extent of the consensus range varies between the Slough and Rotherham socio-economic groups, from 72° to 21° respectively, see Table 3.4.11.1.

The two groups' average subject vector stimuli projection orders are dissimilar and the stimuli clusters observed in earlier investigation occur on only the Slough SEG 7/10 average vector (see figures 3.4.11.13 and 3.4.11.14).

3.4.11.4 A Comparison of Results: Rotherham residents in SEG 9 with Slough residents in SEG 9.

The overall subject-vector preference ranges vary between the socio-economic groups before and after subject vector extremes are discounted. Slough residents in SEG 9 have a more varied overall preference range (135°) than Rotherham residents in SEG 9 (99°), see Table 3.4.11.1.

The proportion of the total subjects represented by the consensus, differs between the two groups. Among the Rotherham SEG 9 residents' consensus, the proportion is high (85%) but low (only 50%) among the Slough residents' consensus. However, the extent of the preference consensus range is almost identical for the Rotherham and Slough groups, with ranges of 36° and 34° respectively, see Table 3.4.11.1.

The groups' average subject vector stimuli projection orders are very similar and the three clusters of stimulus points observed in earlier investigations, are clearly discernable on the groups average vectors (see figures 3.4.11.13 and 3.4.11.14).

3.4.11.5 A Comparison of Results: Rotherham residents in SEG 6/12 with Slough residents in SEG 6/12

The overall subject-vector preference ranges for the two groups, vary before and after the extreme vectors are discounted. Slough residents in SEG 6/12 have a more varied overall preference range (152^{o}) than Rotherham residents in SEG 6/12 (37^{o}) (see Table 3.4.11.1)

The proportion of the total subjects represented by the consensus differs for the two groups. Among the Rotherham SEG 6/12 residents consensus, the proportion is high (85%), but low (50%) among the Slough residents consensus. The extent of the preference consensus range is almost identical for the Rotherham and Slough groups at 37^{o} and 35^{o} respectively (see Table 3.4.11.1).

The groups' average subject vector stimuli projection orders are similar but variations occur between stimulus points 8 and 7, and points 9 and 6 (see figures 3.4.11.13 and 3.4.11.14). The stimuli clusters observed in earlier investigations occur along both groups average vectors, but on the Slough average vector, stimulus point 3 appears with the middle preference range stimuli cluster instead of the most preferred stimuli cluster.

3.4.11.6 A Comparison of Results: Rotherham residents in SEG 5-2/8 with Slough residents in SEG 5-2/8

The overall subject vector preference ranges contain no vector extremes but vary between the two groups, see Table 3.4.11.1; Slough residents in SEG 5-2/8 have a more varied preference range (80^{o}) than Rotherham residents in SEG 5-2/8 (56^{o}).

In both groups, a large proportion of the total subjects is represented by the consensus of subjects preferences (80% - 85%). The extent of the consensus range varies slightly between the Slough and Rotherham socio-economic groups, from 35^{o} to 27^{o} respectively.

The groups' average subject vector stimuli projection orders are almost identical, the only difference occurs between stimulus points 7 and 8 (see figures 3.4.11.13 and 3.4.11.14). There are no stimuli clusters common to both groups' average vectors.

3.4.11.7 A Comparison of Results: Rotherham residents in SEG 5-1/1-2 with Slough residents in SEG 5-1/1-2

The overall subject vector preference ranges contain no vector extremes but vary between the two groups; (see Table 3.4.11.1) Rotherham residents in SEG 5-1/1-2 have a more varied preference range (74^{o}) than Slough residents in SEG 5-1/1-2 (58^{o}).

In both groups, a large proportion of the total subjects is represented by the consensus of subjects' preferences (60% - 67%). The extent of the consensus range varies between the Rotherham and Slough socio-economic groups, from 25^{o} to 8^{o} respectively.

The groups' average subject vector stimuli projection orders are dissimilar and only the least preferred cluster of stimulus points 10, 8 and 7 is common to both average vectors (see figures 3.4.11.13 and 3.4.11.14).

3.4.11.8 Investigation Results Summary

(i) Dimension one variance scores are quite low for three of the Slough socio-economic groups. The dimension scores for Slough SEG 9, Slough SEG 6/12 and Slough SEG 11 represent only 52% - 44% of the total data variance, compared with scores greater than 60% for the other Slough and all Rotherham socio-economic groups.

(ii) In the Rotherham and Slough results different socio-economic groups have the most varied overall preferences; in Rotherham, SEG 7/10 and in Slough

SEG 6/12. Also different socio-economic groups within the two towns' results exhibit the least varied overall preferences; in Rotherham SEG 6/12 and in Slough SEG 5-1/1-2.

(iii) The ranked orders of the preference judgement ranges for Rotherham and Slough socio-economic groups are similar, but do not provide evidence to support the assumptions that higher socio-economic groups produce more (or less) varied preference judgements than lower socio-economic groups.

(iv) The ranked orders of preference consensus ranges are dissimilar for the Rotherham and Slough socio-economic groups. Among Rotherham residents, SEG 11 has the most varied preference consensus and SEG 7/10 the least varied. Where as among Slough residents, SEG 7/10 has the most varied preference consensus and SEG 5-1/1-2 the least varied.

(v) The proportion of the total subjects represented by the consensus area is high (60% - 88%) for all but two Slough socio-economic groups. The preference consensus ranges represent only 50% and 59% of the total subjects in SEG 5-2/8 and SEG 9.

(vi) There is a greater degree of similarity across the Rotherham socio-economic groups' average subject vector stimuli projection order than there is across the Slough socio-economic groups' average vector projections.

(vii) Stimuli clusters occur among the least preferred stimulus points 10, 8 and 7 on the Rotherham and Slough groups' average vectors. For the majority of cases, stimulus points 8 and 7 lie particularly close together on these average subject-vectors. The three clusters of stimuli observed in earlier investigations occur along five average vectors namely the Slough average vectors for residents in SEG 7/10, SEG 9 and SEG 6/12, and the Rotherham average vectors for residents in SEG 9 and SEG 6/12.

(viii) When each Rotherham socio-economic group is compared with the corresponding Slough socio-economic group, Slough groups demonstrate the most varied preference judgements with one exception; Rotherham residents in SEG 5-1/1-2 have more varied overall preference judgements than Slough residents in SEG 5-1/1-2.

(ix) The corresponding Rotherham and Slough groups for SEG 9, SEG 6/12, SEG 11 and SEG 5-2/8 have similar preference consensus ranges. However, Rotherham residents in SEG 5-1/1-2 demonstrate a more varied preference consensus than Slough residents in SEG 5-1/1-2, but Slough residents in SEG 7/10 have a more varied preference consensus than Rotherham residents in SEG 7/10.

(x) The results do not support the hypothesis that socio-economic status affects preference judgements. They do not show that residents of higher socio-economic status have more varied preferences than those of lower socio-economic status.

The remarkable similarity between the Rotherham and Slough ranked orders of overall preference judgements may be a product of one of two possible causes. It is likely that some peculiar relationship might exist between socio-economic and residents' preferences judgements, making certain socio-economic groups produce the same ranked order of preference judgement variation in the Rotherham and Slough results. Alternatively the effect is spurious, a product of the respondent groupings used in the particular MDPREF scaling programmes for this and the preceding investigation.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes	Overall pref. range excluding vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
73	Rotherham respondents in SEG 11	88	87	87	48	86
75	Rotherham respondents in SEG 7 and SEG 10	84	127	127	21	64
77	Rotherham respondents in SEG 9	78	189	99	36	77
79	Rotherham respondents in SEG 6 and SEG 12	79	154	37	37	85
81	Rotherham respondents in SEG 5-2 and SEG 8	86	56	56	27	85
83	Rotherham respondents in SEG 5-1 and SEG 1-2	87	74	74	25	60
74	Slough respondents in SEG 11	62	142	89	52	75
76	Slough respondents in SEG 7 and SEG 10	72	152	105	72	88
78	Slough respondents in SEG 9	65	165	135	34	59
80	Slough respondents in SEG 6 and SEG 12	60	287	153	35	50

Table 3.4.11.1 MDPREF Summary of Rotherham & Slough Socio-Economic Respondent Groups (Part One)

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
82	Slough respondents in SEG 5-2 and SEG 8	81	80	80	35	80
84	Slough respondents in SEG 5-1 and SEG 1-2	99	58	58	8	67

Table 3.4.11.1 MDPREF Summary of Rotherham and Slough Socio-Economic Respondent Groups

(Part Two)

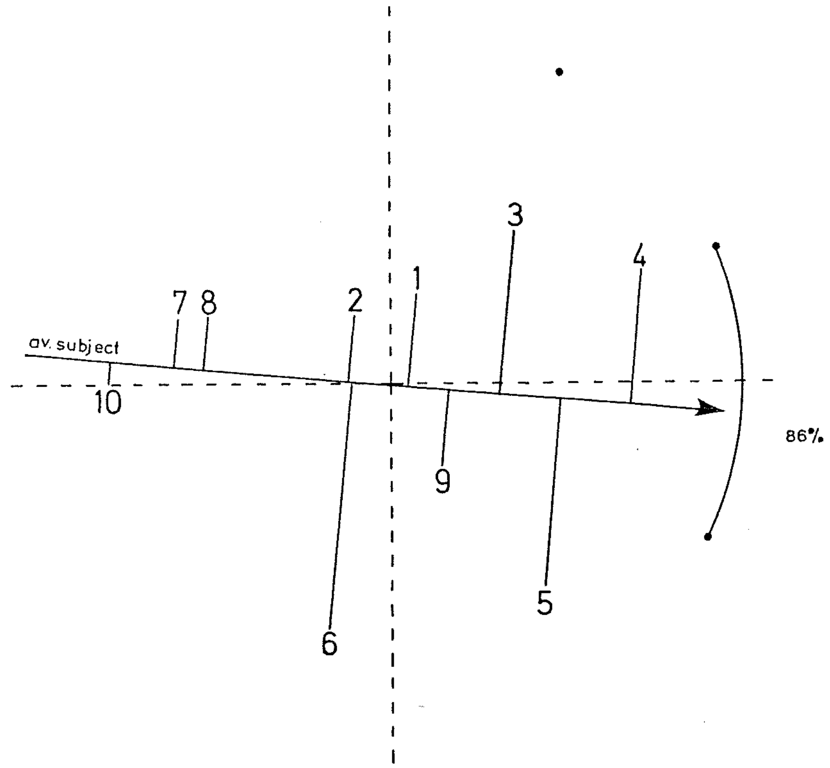


Fig.3.4.11.1 MDPREF 73 Configuration: Rotherham Respondents in Socio-Economic Group 11

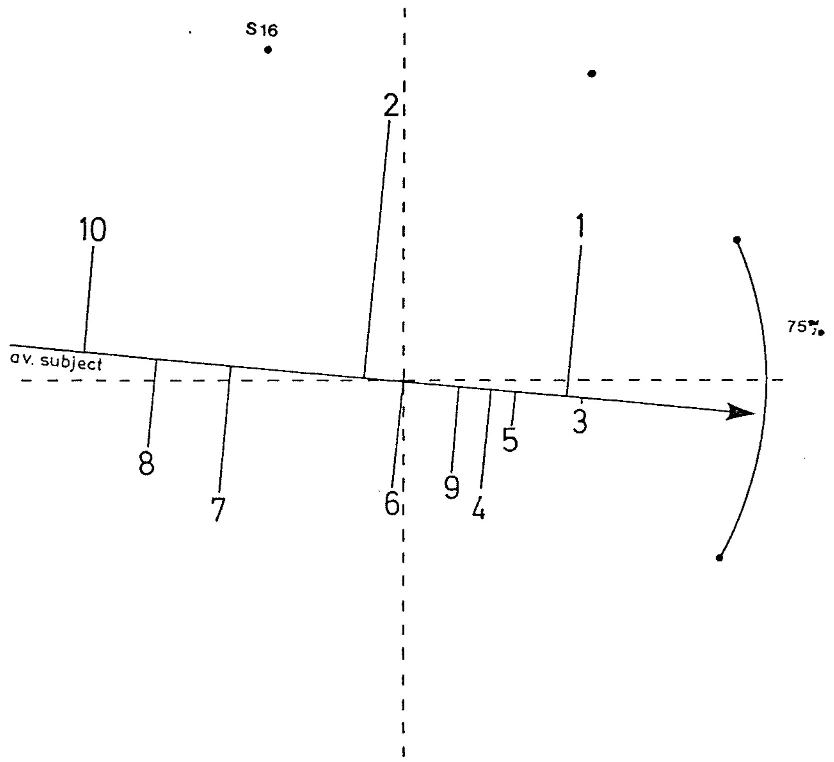


Fig.3.4.11.2 MDPREF 74 Configuration: Slough Respondents in Socio-Economic Group 11

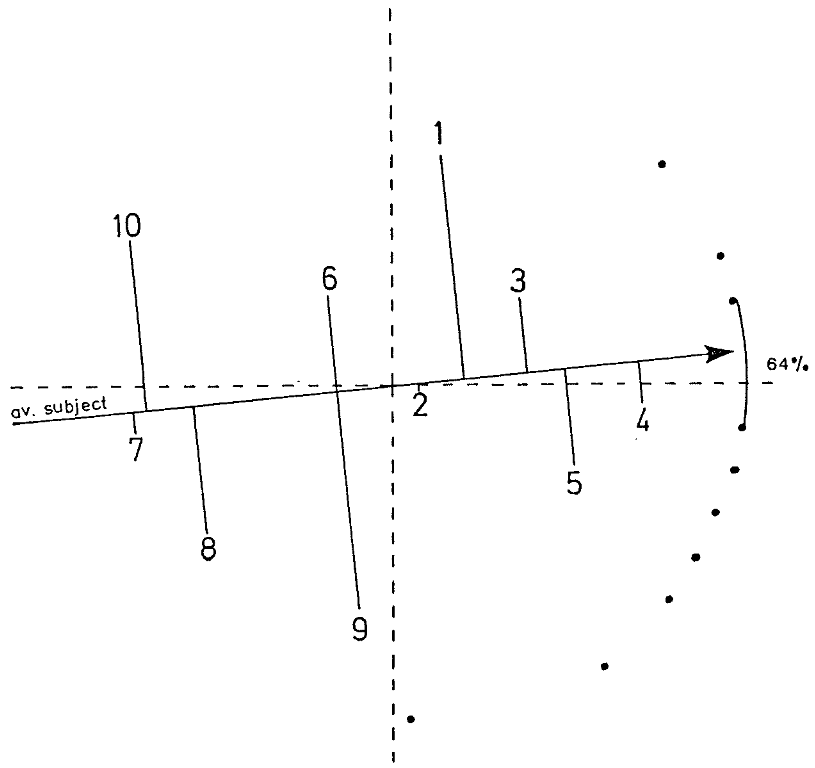


Fig.3.4.11.3 MDPREF 75 Configuration: Rotherham Respondents in Socio-Economic Groups 7 and 10

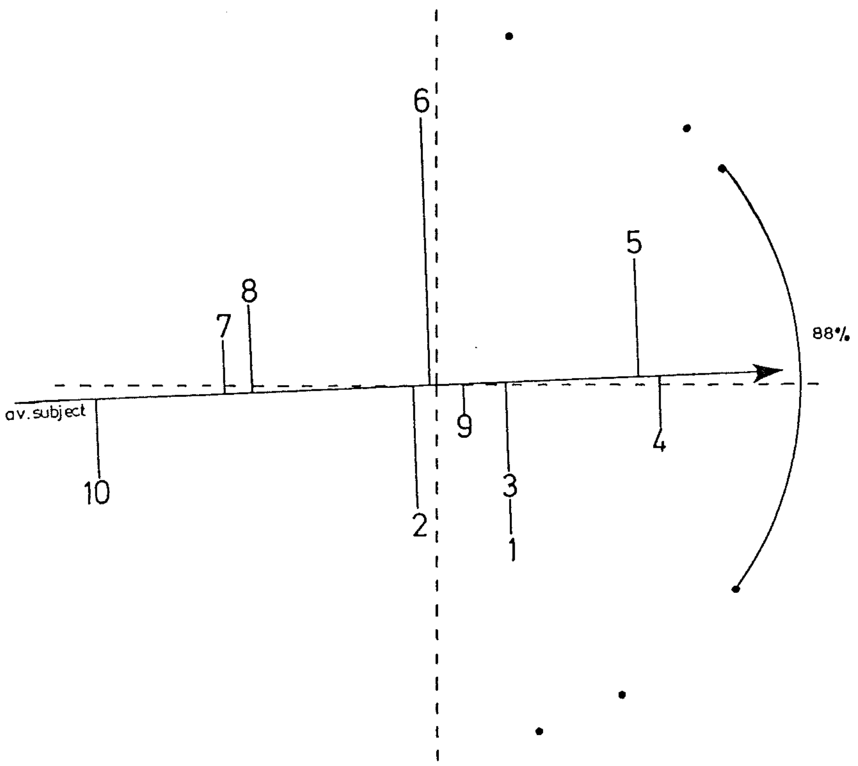


Fig.3.4.11.4 MDPREF 76 Configuration: Slough Respondents in Socio-Economic Groups 7 and 10

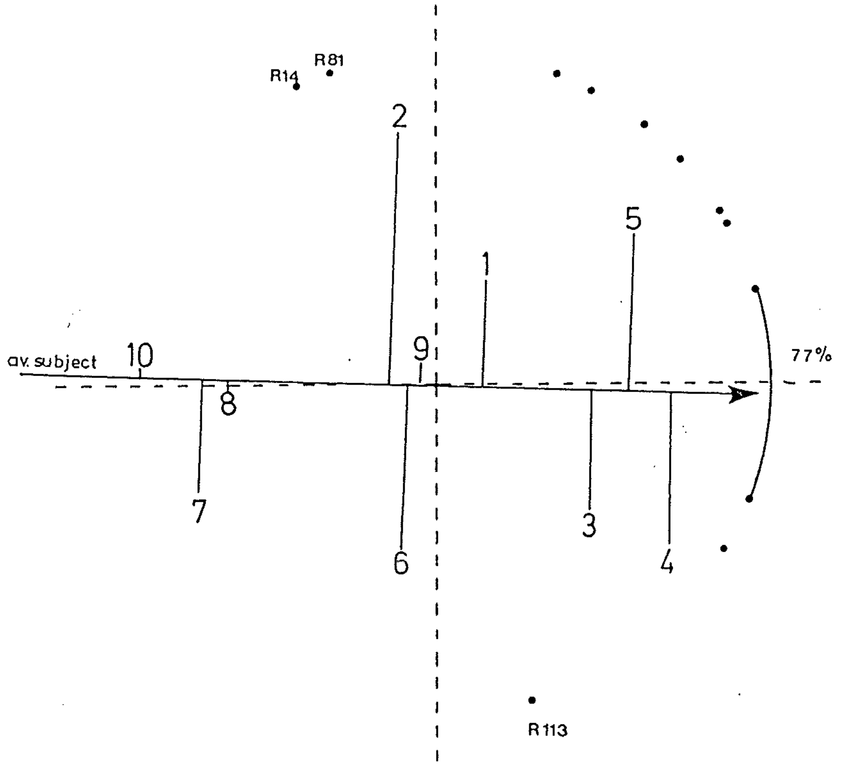


Fig.3.4.11.5 MDPREF 77 Configuration:Rotherham Respondents in Socio-Economic Group 9

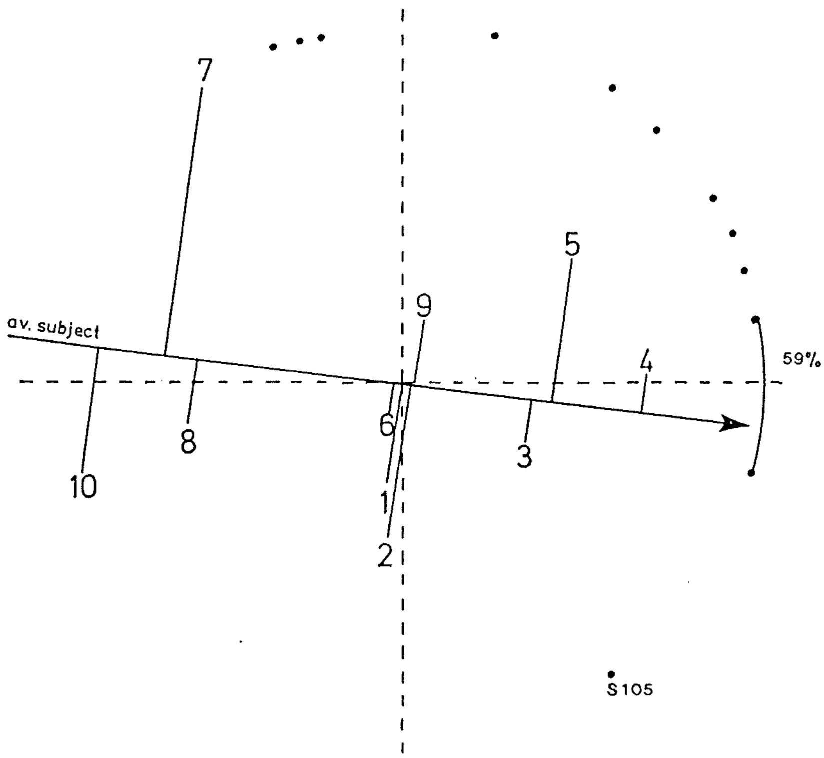


Fig.3.4.11.6 MDPREF 78 Configuration: Slough Respondents in Socio-Economic Group 9

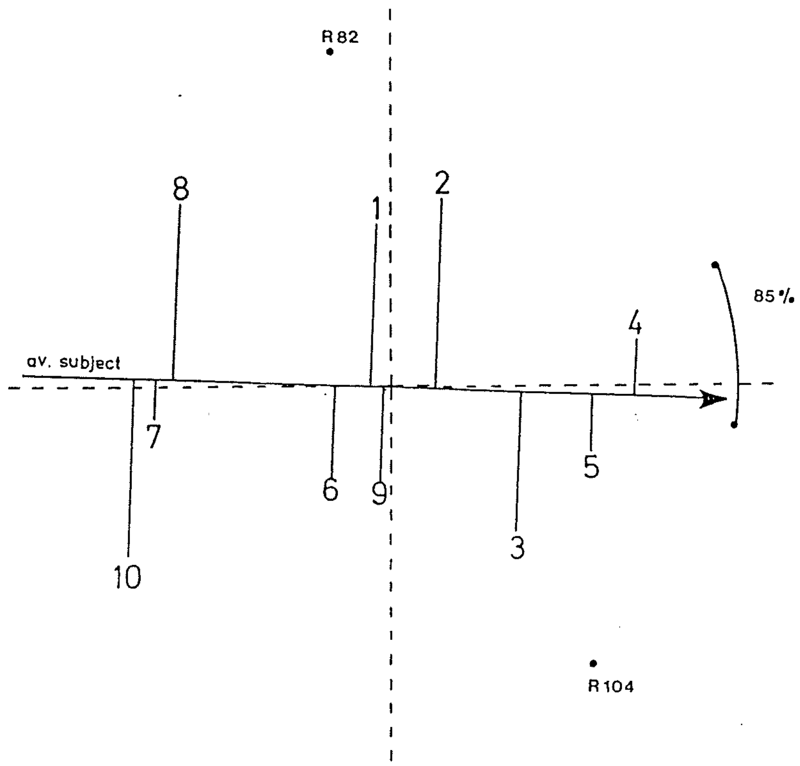


Fig.3.4.11.7 MDPREF 79 Configuration: Rotherham Respondents in Socio-Economic Groups 6 and 12

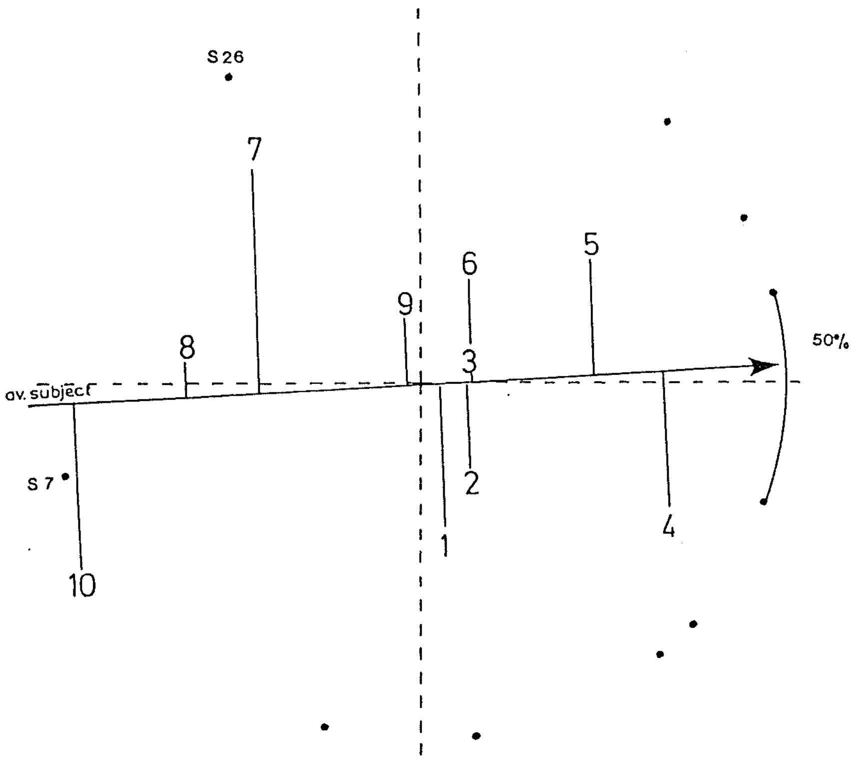


Fig.3.4.11.8 MDPREF 80 Configuration: Slough Respondents in Socio-Economic Groups 6 and 12

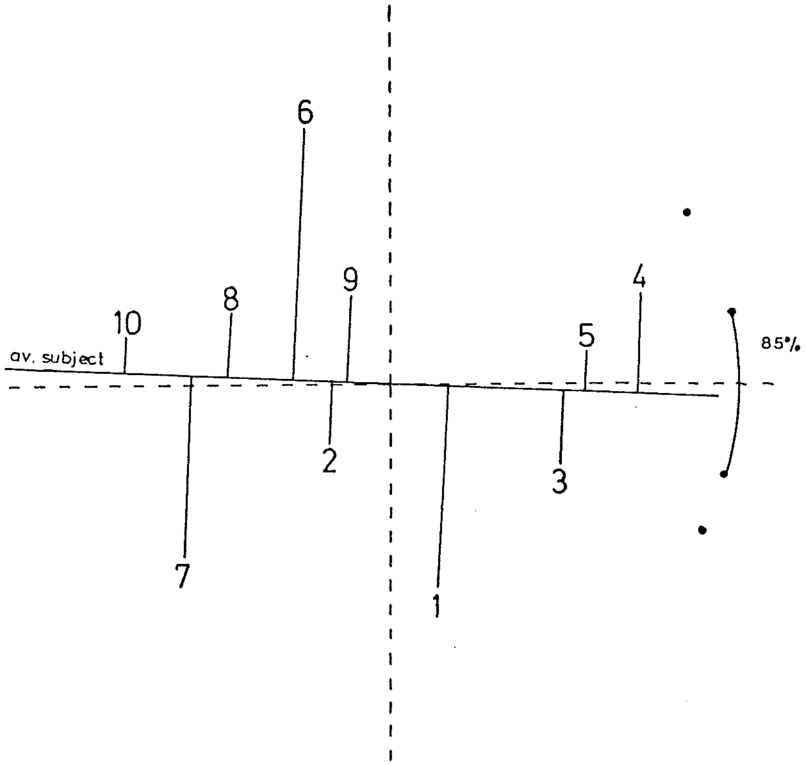


Fig.3.4.11.9 MDPREF 81 Configuration: Rotherham Respondents in Socio-Economic Groups 5-2 and 8

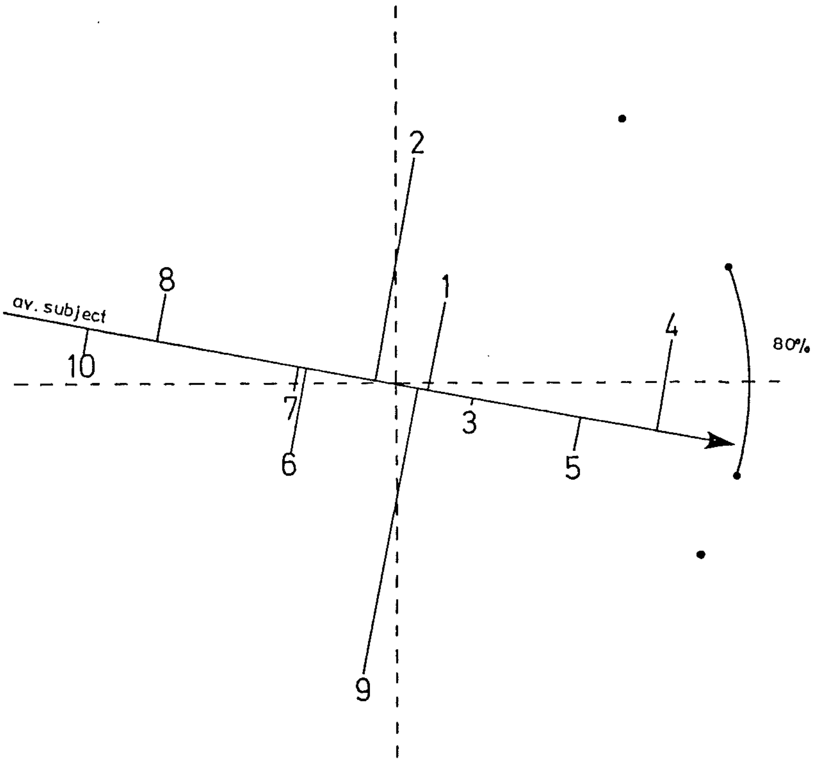


Fig.3.4.11.10 MDPREF 82 Configuration: Slough Respondents in Socio-Economic Groups 5-2 and 8

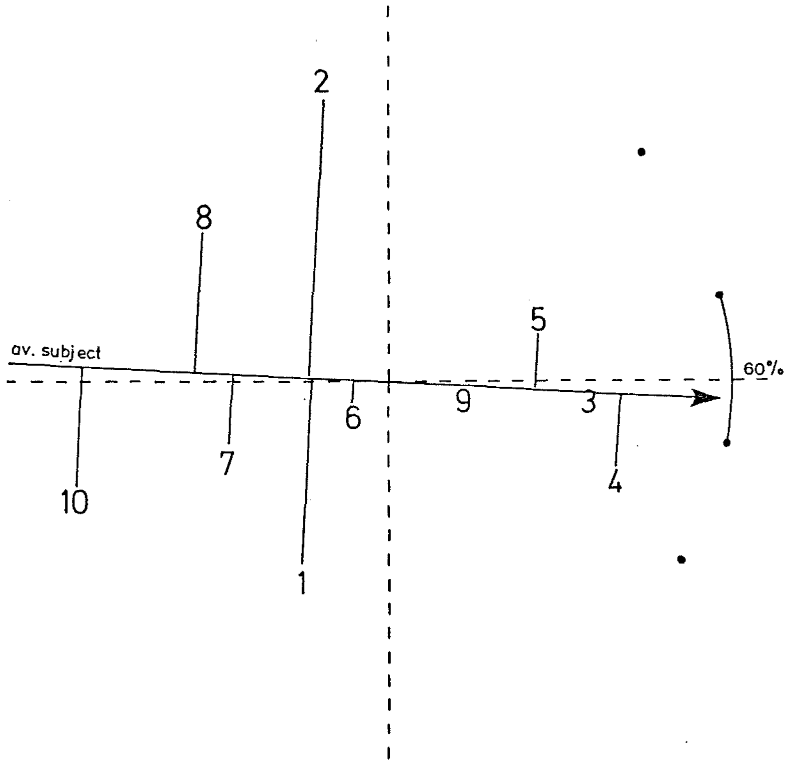


Fig.3.4.11.11 MDPREF 83 Configuration: Rotherham Respondents in Socio-Economic Groups 5-1 and 1-2

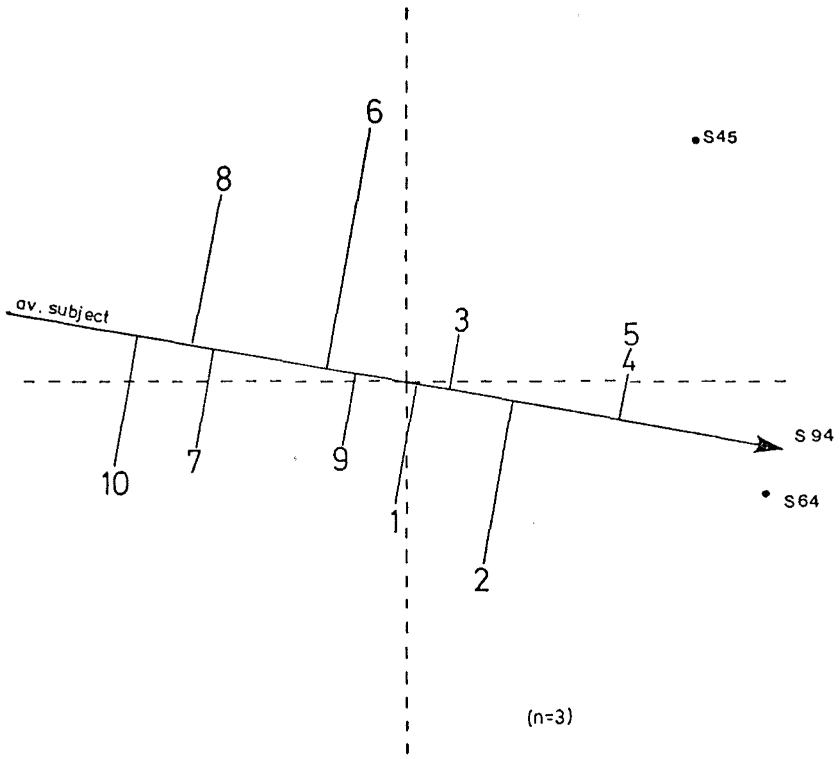


Fig.3.4.11.12 MDPREF 84 Configuration: Slough Respondents in Socio-Economic Groups 5-1 and 1-2

Figure 3.4.11.13 Effect of Socio-Economic Status on Rotherham Respondent Preferences

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction ⟶)
73	Rotherham respondents in SEG 11	10 7 8 2 6 1 9 3 5 4
75	Rotherham respondents in SEG 7 & 10	7 10 8 9 6 2 1 3 5 4
77	Rotherham respondents in SEG 9	10 7 8 2 6 9 1 3 5 4
79	Rotherham respondents in SEG 6 & 12	10 7 8 6 1 9 2 3 5 4
81	Rotherham respondents in SEG 5-2 & 8	10 7 8 6 2 9 1 3 5 4
83	Rotherham respondents in SEG 5-1 & 1-2	10 8 7 2 1 6 9 5 3 4

Figure 3.4.11.14 Effect of Socio-Economic Status on Slough Respondent Preferences

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
74	Slough respondents in SEG 11	10 8 7 2 6 9 4 5 1 3
76	Slough respondents in SEG 7 & 10	10 7 8 2 6 9 3 1 5 4
78	Slough respondents in SEG 9	10 7 8 6 1 9 2 3 5 4
80	Slough respondents in SEG 6 & 12	10 8 7 9 1 6 3 2 5 4
82	Slough respondents in SEG 5-2 & 8	10 8 7 6 2 9 1 3 5 4
84	Slough respondents in SEG 5-1 & 1-2	10 8 7 6 9 1 3 2 5 4

3.4.12 An Investigation Of The Effect Of Residents' Satisfaction With The Interview Town On Preference Judgements

It is possible that residents who are satisfied and content to be living in the interview town, may consciously, or subconsciously be influenced in their preference judgements in favour of the local townscape views. In the same way, residents who are dissatisfied, unhappy and discontent to be living in Slough or Rotherham, may bias their preferences against local views. The purpose of this investigation is to detect whether any bias exists as a result of residents' satisfaction or dissatisfaction with the interview town; particular attention is paid to the position of the local stimulus points on the average subject vector stimuli projection orders and clusters.

This investigation refers to programmes:

MDPREF 85. - Rotherham residents dissatisfied with living in Rotherham (figure 3.4.12.1)

MDPREF 86. - Rotherham residents satisfied with living in Rotherham (figure 3.4.12.2)

MDPREF 87. - Slough residents dissatisfied with living in Slough (figure 3.4.12.3)

MDPREF 88. - Slough residents satisfied with living in Slough (figure 3.4.12.4)

The MDPREF programmes analysed are depicted in the figures specified above.

3.4.12.1 A Comparison of Results: Rotherham dissatisfied residents with Rotherham residents satisfied with living in Rotherham

Two dimensional MDPREF scaling is adequate for both groups representing 73% - 79% of the total data variance (see Table 3.4.12.

The overall subject-vector termini preference range is considerably less varied after the subject-vector extremes are discounted but the Rotherham dissatisfied respondent group continue to exhibit the most varied overall preferences.

The discounted extreme vectors are R14 and R113 in the dissatisfied residents group and R17 in the Rotherham residents group satisfied with living in the town.

The extent of the range covered by a concentration of subject-vector termini varies slightly between the two groups. Dissatisfied Rotherham residents have a slightly more varied preference consensus than satisfied residents. The proportion of the groups' total subjects represented by the consensus range is high (83% - 93%) in both groups, see Table 3.4.12.

The groups' average subject vector stimuli projection orders are very similar. The only variations occur within the middle preference range order of stimulus points 6, 9 2 and 1 (see figure 3.4.12.5). The stimuli clusters are very similar along both groups' average vectors (matching those observed in earlier investigations). The only difference is found in the middle preference range stimulus points which are highly clustered on the dissatisfied residents' average vector, but loosely grouped on the satisfied residents' average vector. This evidence does not support the assumption that residence satisfaction or dissatisfaction influences stimuli preference judgements.

3.4.12.2 A Comparison of Results: Slough dissatisfied residents with Slough residents satisfied with living in Slough

Two dimensional scaling is adequate for both groups representing 65% - 69% of the total data variance (see Table 3.4.12). However the dimension one scores are quite low (52% - 57%) compared with those of the Rotherham residents groups, see Table 3.3.2.4.

The overall subject-vector termini preference range is considerably less varied once the extreme vectors are discounted (see Table 3.4.12). Slough satisfied residents group exhibit the most varied overall preference judgements, before and after the extreme vectors are excluded.

The discounted extreme vectors are S7 and S16 in the dissatisfied residents group and S24, S117 and S120 in the Slough residents group satisfied with living in Slough.

Satisfied residents have a more varied preference consensus than satisfied residents, see Table 3.4.12 but the proportion of the groups' total subjects represented by the consensus range is high (84% - 85%) or both groups.

The groups' average subject-vector stimuli projection orders vary within the middle preference range, between stimulus points 6, 9, 2 and 1, and the most preferred stimulus points 5 and 4 are reversed (see figure 3.4.12.5). Stimuli clusters are not very distinct along either average vector, with the exception of points 8 and 7, which lie close together on both average vectors. Despite these small variations in stimuli projections, the evidence provided by MDPREF scaling does not support the assumption that residence satisfaction or dissatisfaction influences stimuli preference judgements.

3.4.12.3 Investigation Results Summary

(i) Rotherham residents' groups preferences are better represented in two dimensions (73% - 79% of the total data variance), than those of Slough residents' groups (65% - 69%).

(ii) It would appear that neither residence satisfaction or dissatisfaction affects respondents overall preference judgements or preference consensus ranges. For example, Rotherham dissatisfied residents have the most varied overall preference judgements and preference consensus ranges, but in the Slough group satisfied respondents have the most varied preference judgements and consensus ranges.

(iii) A large degree of similarity exists between the Rotherham residents' group average vector stimuli projection orders and clusters, but a number of variations exist along the Slough residents groups average vectors.

(iv) The evidence provided by this MDPREF scaling investigation does not support the assumption that respondents' satisfaction or dissatisfaction with living in the interview town, influences stimuli preference judgements.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes (measured as degrees of a circle)	Overall pref. range excluding vector extremes (measured as degrees of a circle)	Preference consensus range (A)	% of group repre-sented by A
85	Rotherham respondents dissatisfied with Rotherham	73	216	135	70	83
86	Rotherham respondents satisfied with Rotherham	79	128	97	60	93
87	Slough respondents dissatisfied with Slough	69	279	173	77	85
88	Slough respondents satisfied with Slough	65	360	212	92	84

Table 3.4.12 MDPREF Summary of Rotherham & Slough Respondent Groups Satisfied and Dissatisfied With Living in Rotherham or Slough

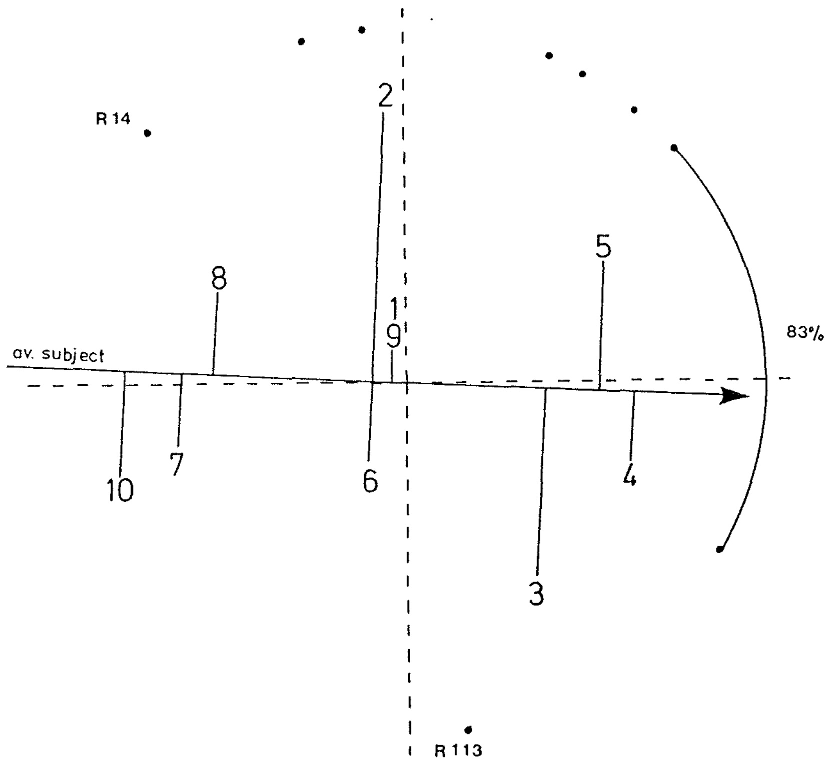


Fig.3.4.12.1 MDPREF 85 Configuration: Rotherham Residents Dissatisfied with living in Rotherham

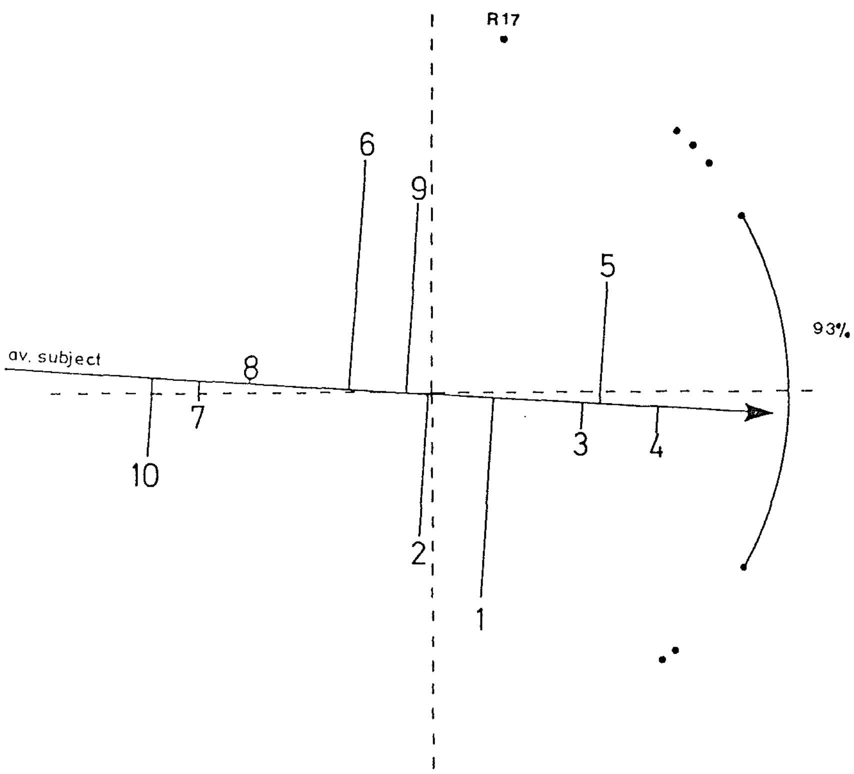


Fig.3.4.12.2 MDPREF 86 Configuration: Rotherham Residents Satisfied with Living in Rotherham

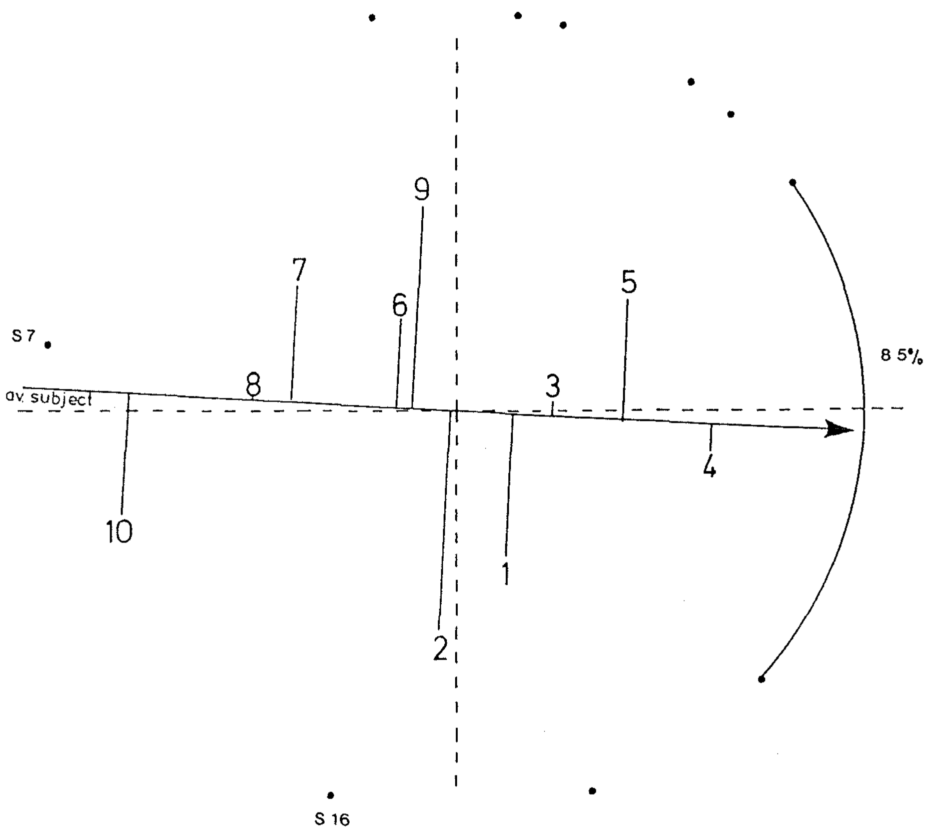


Fig.3.4.12.3 MDPREF 87 Configuration: Slough Residents Dissatisfied with living in Slough

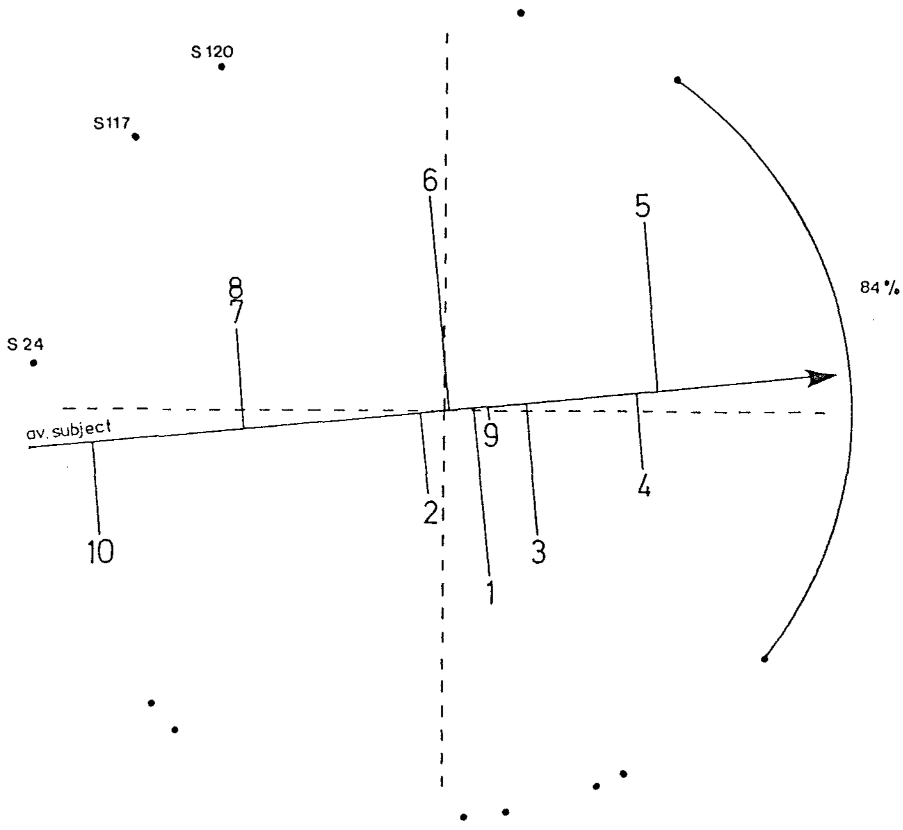


Fig.3.4.12.4 MDPREF 88 Configuration: Slough Residents Satisfied with living in Slough

Figure 3.4.12.5 Effects of Respondent Dissatisfaction/Satisfaction with Town of Residence

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction ⟶)
85	Rotherham respondents dissatisfied with living in Rotherham	10 7 8 2 1 6 9 3 5 4
86	Rotherham respondents satisfied with living in Rotherham	10 7 8 6 9 2 1 3 5 4
87	Slough respondents dissatisfied with living in Slough	10 8 7 6 9 2 1 3 5 4
88	Slough respondents satisfied with living in Slough	10 8 7 2 6 1 9 3 4 5

3.4.13 An Investigation Of The Effect On Preference Judgements Of Local Residents' Attitudes Towards The Appearance Of The Interview Towns

It is possible that preference judgements of unattractive townscape views (local and non-local), are consciously or subconsciously influenced by the resident's attitude towards the appearance of the local interview town. If the attitude is unfavourable, this could consciously or subconsciously bias preference judgements against local views. Such a proposition is based on the assumption that the residents would believe that local unattractive views on display are "typical" of the whole town, but that the non-local views are "one-off" unattractive scenes and completely unrepresentative of the other unfamiliar survey town. The purpose of this investigation is to determine whether such attitudes towards townscape appearance affect preference judgements; it pays particular attention to the position of local stimulus points along residents groups' average-subject vector stimuli projection orders and stimuli clusters.

This investigation refers to programmes:

MDPREF 89. - Rotherham residents who find Rotherham appearance pleasing (figure 3.4.13.1)

MDPREF 90. - Rotherham residents who do not find Rotherham appearance pleasing (figure 3.4.13.2)

MDPREF 91. - Slough residents who find Slough appearance pleasing (figure 3.4.13.3)

MDPREF 92. - Slough residents who do not find Slough appearance pleasing (figure 3.4.13.4)

The MDPREF programmes analysed are depicted in the figures specified above.

3.4.13.1 A Comparison of Results: Rotherham residents groups with favourable and unfavourable attitudes towards the appearance of Rotherham

Two dimensional MDPREF scaling is adequate for both groups representing 78% - 79% of the total data variance (see Table 3.4.13).

The overall subject-vector termini preference range varies only slightly until the extreme subject vectors are discounted when Rotherham residents with a favourable attitude towards the appearance demonstrate a more varied overall preference range than residents with an unfavourable attitude, see Table 3.4.13. The extreme vectors discounted are R14, R65, and R81 from the group with a favourable attitude and R82 and R113 from the group with an unfavourable attitude.

The extent of the range covered by a concentration of subject vector termini varies between the two groups. Residents with a favourable attitude have a more varied preference consensus than those with an unfavourable attitude towards the appearance of Rotherham. In both groups, the proportion of the total subjects represented by the consensus range is high (89% - 93%), see Table 3.4.13.

The groups' average subject-vector stimuli projection orders are very similar (see figure 3.4.13.5). Variations occur only between stimulus points 9 and 2, and points 3 and 5. The stimuli clusters are very similar on both groups' average vectors and match those observed in earlier investigations. The large degree of similarity between the groups' average vector stimuli projection orders and clusters provides no evidence to indicate that residents groups preference judgements favour either local or non-local views. The MDPREF scaling results do not therefore support the assumption that Rotherham residents preference judgements are influenced by attitudes towards the appearance of the town.

3.4.13.2 A Comparison of Results: Slough residents groups with favourable and unfavourable attitudes towards the appearance of Slough

Two dimensional MDPREF scaling is adequate for both groups representing 62% - 71% of the total data variance (see Table 3.4.13). However dimension one scores are quite low

(50% - 59%) compared with those of the Rotherham residents groups, see Table 3.3.2.5.

The overall subject-vector termini preference range varies considerably between the two groups. Before and after the extreme vectors are discounted, Slough residents with an unfavourable attitude towards the appearance of Slough, exhibit the most varied overall preference judgements.

The discounted extreme vectors are S26, S104 and S112 from the group with a favourable attitude and S16, S24, S117 and S120 from the group with an unfavourable attitude.

The extent of the range covered by a concentration of subject-vector termini varies (see Table 3.4.13). Residents with an unfavourable attitude have a more varied preference consensus than those with a favourable attitude towards the appearance of Slough. In both groups, the proportion of the total subjects represented by the consensus range is high (73% - 80%).

The groups' average subject-vector stimuli projection orders bear some similarity although variations occur between stimulus points 6, 2, 9 and 1, and points 3 and 4 (see figure 3.4.13.5). Only two clusters of stimuli are discernable along the average vectors, clusters of stimulus points 8 and 7 and points 6, 9 and 2. Despite these variations there is no evidence to indicate that the residents' group preference judgements favour either local or non-local views. The MDPREF scaling results therefore do not support the assumption that Slough residents' preference judgements are influenced by attitudes towards the appearance of the town.

3.4.13.3 Investigation Results Summary

(i) Rotherham residents groups' preferences are better represented in two dimensions (78% - 79%) of the total data variance), than those of Slough residents' groups (62% - 71%).

(ii) Attitudes towards the appearance of the interview towns do not appear to affect Rotherham and Slough residents' overall preference judgements or preference consensus ranges. For example Rotherham residents with a favourable attitude towards the appearance of the town have the most varied overall preference judgements and preference consensus ranges, but Slough residents with unfavourable attitudes have the most varied preference judgements and consensus ranges.

(iii) A large degree of similarity exists between the Rotherham residents groups' average vector stimuli projection orders and clusters and there are only a small number of variations between the Slough residents' average vectors.

(iv) The evidence provided by the MDPREF scaling investigation does not support the hypothesis that Rotherham and Slough residents' preference judgements are influenced by attitudes towards the appearance of the interview towns.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range <u>including</u> vector extremes	Overall pref. range <u>excluding</u> vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
89	Rotherham respondents who find Rotherham pleasing to look at	78	322	95	65	89
90	Rotherham respondents who do not find Rotherham pleasing to look at	79	295	54	43	93
91	Slough respondents who find Slough pleasing to look at	71	198	66	42	73
92	Slough respondents who do not find Slough pleasing to look at	62	288	166	80	80

Table 3.4.13 MDPREF Summary of Rotherham and Slough Respondents Satisfied and Dissatisfied With The Appearance of Their Towns

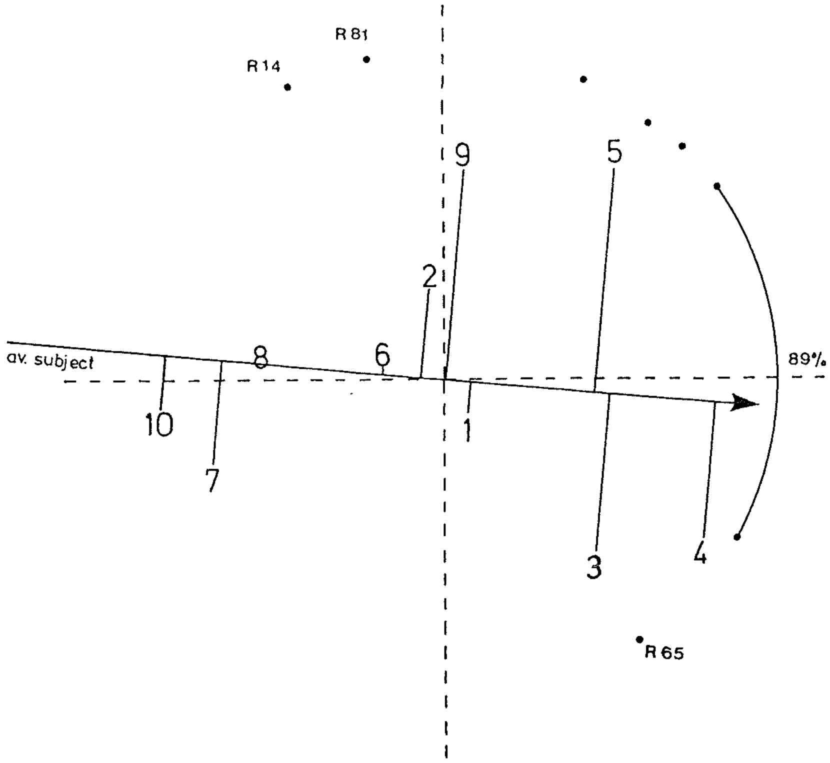


Fig.3.4.13.1 MDPREF 89 Configuration: Rotherham Residents Who Find Rotherham Pleasing To Look At

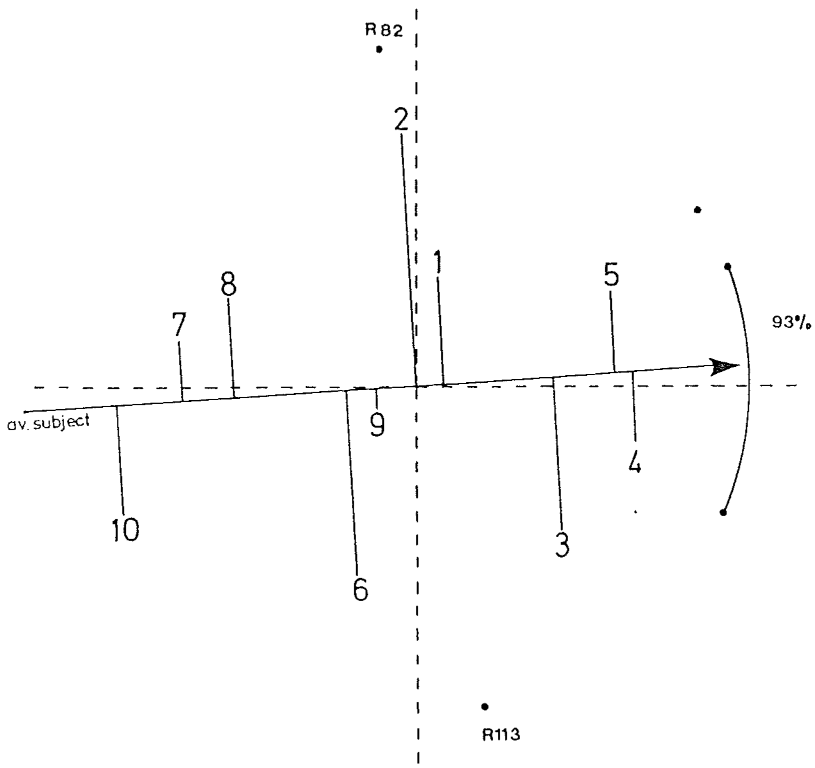


Fig.3.4.13.2 MDPREF 90 Configuration: Rotherham Residents Who Do Not Find Rotherham Pleasing To Look At

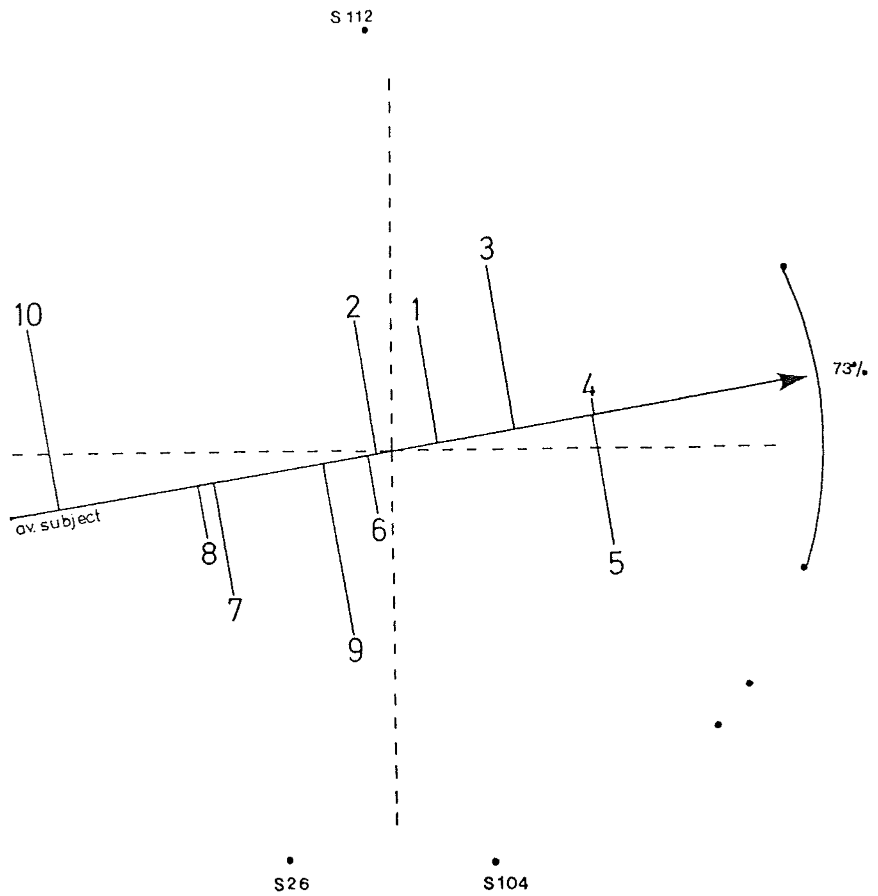


Fig.3.4.13.3 MDPREF 91 Configuration: Slough Residents Who Find Slough Pleasing To Look At

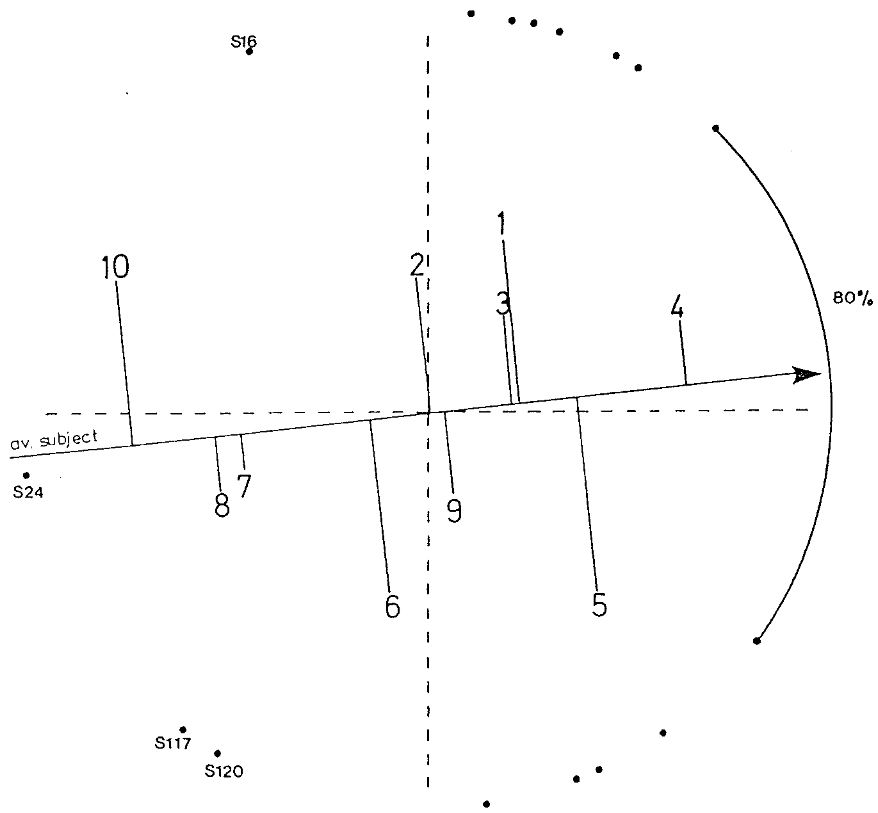


Fig.3.4.13.4 MDPREF 92 Configuration: Slough Residents Who Do Not Find Slough Pleasing To Look At

Figure 3.4.13.5 Effects of Attitudes On The General Appearance of Local Townscape

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
89	Rotherham respondents who find Rotherham pleasing to look at	10 7 8 6 2 9 1 5 3 4
90	Rotherham respondents who do not find Rotherham pleasing to look at	10 7 8 6 9 2 1 3 5 4
91	Slough respondents who find Slough pleasing to look at	10 8 7 9 6 2 1 3 4 5
92	Slough respondents who do not find Slough pleasing to look at	10 8 7 6 2 9 3 1 5 4

3.4.14 An Investigation Of The Effect Of Non-Local Visiting Frequency On Residents' Preference Judgements

This inquiry examines the effect of environmental experience on residents' preference judgements. Environmental experience, in this instance, is measured in terms of the residents' non-local visiting frequency; a measure based upon the frequency with which a resident leaves the interview town to visit other towns, rural, coastal and foreign destinations. The investigation attempts to discover whether respondents with different levels of environmental experience react differently to the environmental stimuli displayed during the preference test. It is presumed that respondents compare the unattractive townscape views with mental images or memories of similar views experienced during visits to other places or types of environments. During the preference test, the respondents compare the townscape photographs on display with memories and mental images of more, or less attractive, similar or dissimilar views experienced elsewhere. Assuming that residents who frequently visit different non-local environments have a larger potential environmental image and or memory store (for use in preference comparison judgements), variations in preference judgement patterns between those residents, and others with less frequent non-local visiting patterns, are likely to emerge in the MDPREF scaling results. It is the purpose of this investigation to identify any such patterns.

This investigation refers to programmes:

MDPREF 93. - Housebound residents, (figure 3.4.14.1)

MDPREF 94. - Residents with non-local visiting frequency, N.L.V.F. = Very low (figure 3.4.14.2)

MDPREF 95. - Residents with N.L.V.F. = Low (figure 3.4.14.3)

MDPREF 96. - Residents with N.L.V.F. = Medium (figure 3.4.14.4)

MDPREF 97. - Residents with N.L.V.F. = High (figure 3.4.14.5)

MDPREF 98. - Residents with N.L.V.F. = Very high (figure 3.4.14.6)

The MDPREF programmes analysed are depicted in the figures specified above.

3.4.14.1 A Comparison of Results: Residents Groups with Different Non-Local Visiting Frequencies

Two dimensional MDPREF scaling is adequate for all but one residents group. In the housebound residents' group, dimensions one and two represent only 53% of the total data variance compared with 70% and 75% in the other residents' groups (see Table 3.3.2.5)

The groups' overall subject-vector termini preference ranges vary considerably before and after subject vector extremes are discounted. However only after the extremes are excluded is a definite pattern discernable (see Table 3.4.14) The overall preference range appears to increase steadily, as the groups' non-local visits increase in frequency, with one exception. Residents with a very low visiting frequency have a wide preference variation range (121^{o}). The extreme vectors discounted are: R14 and S2 in the housebound group; R81, R120 and S24 in the very low frequency group; R17, S26, S43, S59 and S110 in the low frequency group; R82 in the medium frequency group, S7 and S117 in the high frequency group; and S16, S104 and S111 in the very high frequency group.

The extent of the range covered by a concentration of subject-vector termini varies across the groups but unlike the overall preference range, the preference consensus range decreases as the groups' non-local visits increase in frequency there is one exception; Housebound residents have the smallest preference consensus range (43^{o}). The proportion of the total subjects represented by the consensus range is high for all groups (69% - 88%), See Table 3.4.14.

The groups' average subject-vector stimuli projection orders are very similar, with one exception (see figure 3.5.14.7). The housebound residents' average vector is quite dissimilar from the other groups' average vectors. Variations occur between the stimulus points 9, 2 and 1 along each average vector. The most common stimuli cluster to all average vectors is that of stimulus points 7 and 8, discernable on all but the household residents' average vector. Stimulus points 6, 2 and 9 cluster on the average vectors for residents with low, high and very high non-local visiting frequencies. The stimuli clusters observed in earlier investigations are only clearly discernable on the average vector for the group with a very low non-local visiting frequency.

3.4.14.2 Investigation Results Summary

(i) Two dimensional MDPREF scaling is suitable for all but the housebound residents group which would be better represented by three dimensional scaling (69% of the total data variance is represented by dimensions one, two and three).

(ii) There appears to be a positive relationship between visiting frequency and overall preference judgements; the overall preference variation range increases as non-local visiting frequency increases.

(iii) There appears to be a negative relationship between visiting frequency and preference consensus; the extent of the preference consensus range decreases as non-local visiting frequency increases.

(iv) In all residents' groups, a large proportion of the groups total subjects is represented by the preference consensus range.

(v) A large degree of similarity exists between the residents groups' average subject vector stimuli projection orders but only one stimuli cluster (points 7 and 8) is common to the majority of the groups' average vectors.

(vi) The results of this investigation reveal a relationship between environmental experience, measured as non-local visiting frequency, and preference judgements. However, it is necessary to prove that this relationship is not just a spurious product of the particular aggregate respondent groupings used in the MDPREF scaling programmes for this inquiry. A further investigation is therefore required to clarify this situation; to replicate the relationship in MDPREF scaling results for groups of Rotherham and Slough residents with different non-local visiting frequencies.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes	Overall pref. range excluding vector extremes	Preference consensus range (A)	% of group represented by A
			(measured as degrees of a circle)			
93	All housebound respondents	53	313	61	43	69
94	All respondents with very low level non-local visiting frequency (NLVF)	70	270	121	65	78
95	All respondents with low level NLVF	72	337	81	66	88
96	All respondents with medium level NLVF	75	140	98	56	88
97	All respondents with high level NLVF	74	310	115	55	81
98	All respondents with very high level NLVF	73	320	142	49	81

Table 3.4.14 MDPREF Summary for respondents with different levels of environmental experience (NLVF)

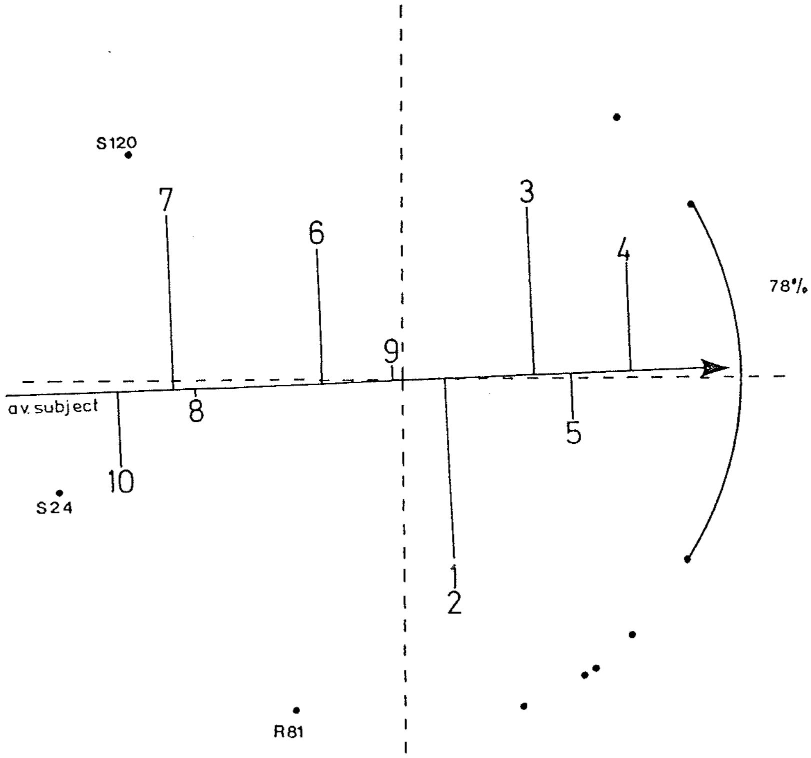


Fig.3.4.14.1 MDPREF 93 Configuration: All House Bound Respondents

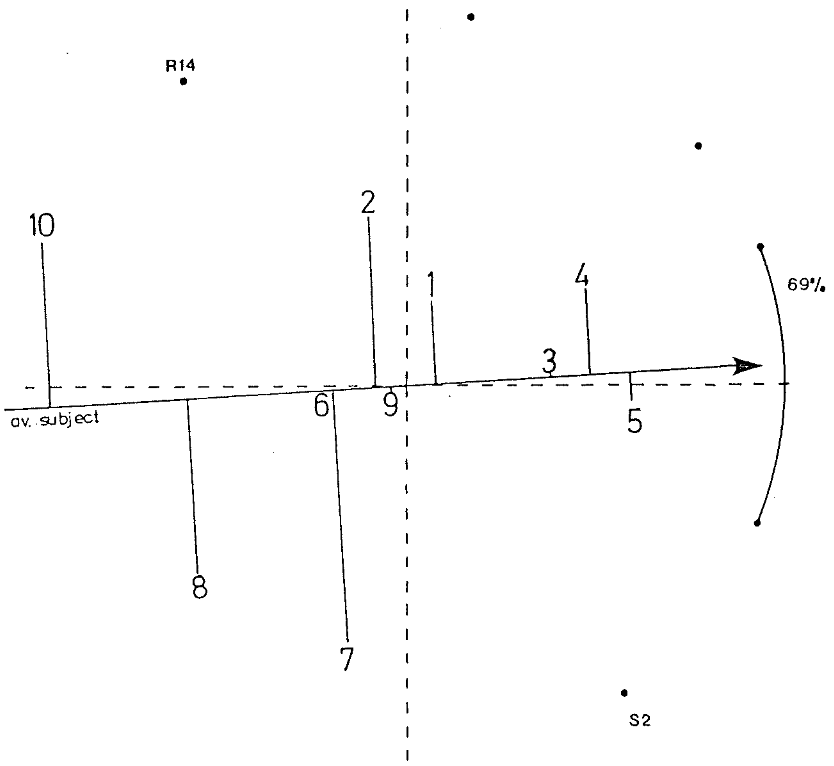


Fig.3.4.14.2 MDPREF 94 Configuration: All Respondents With a VERY LOW level of Environmental Experience (NLVF = Very Low)

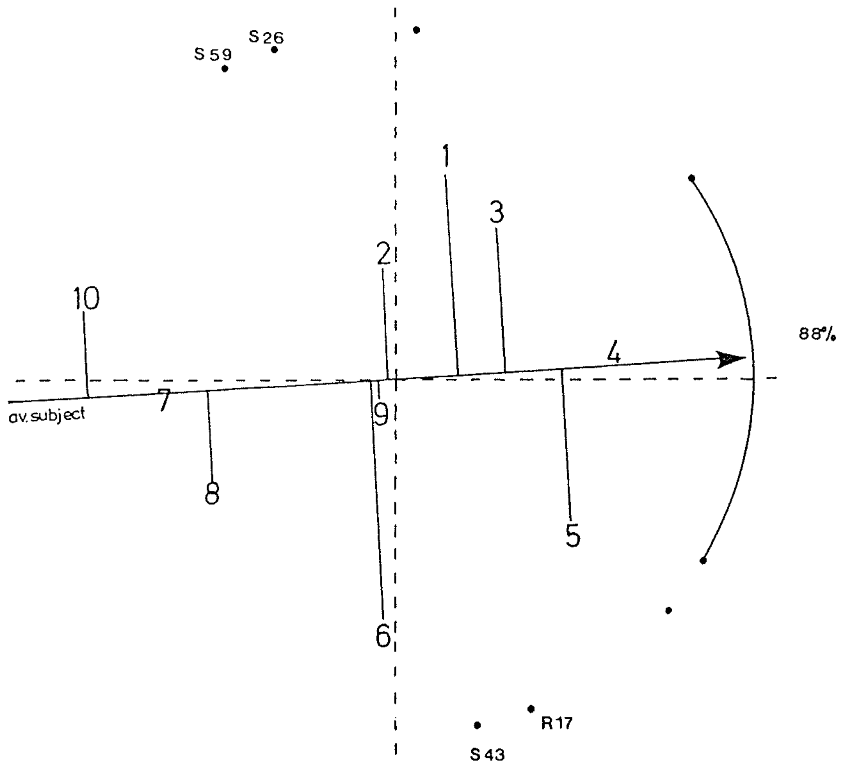


Fig.3.4.14.3 MDPREF 95 Configuration: All Respondents with a LOW Level of Environment Experience (NLVF = Low)

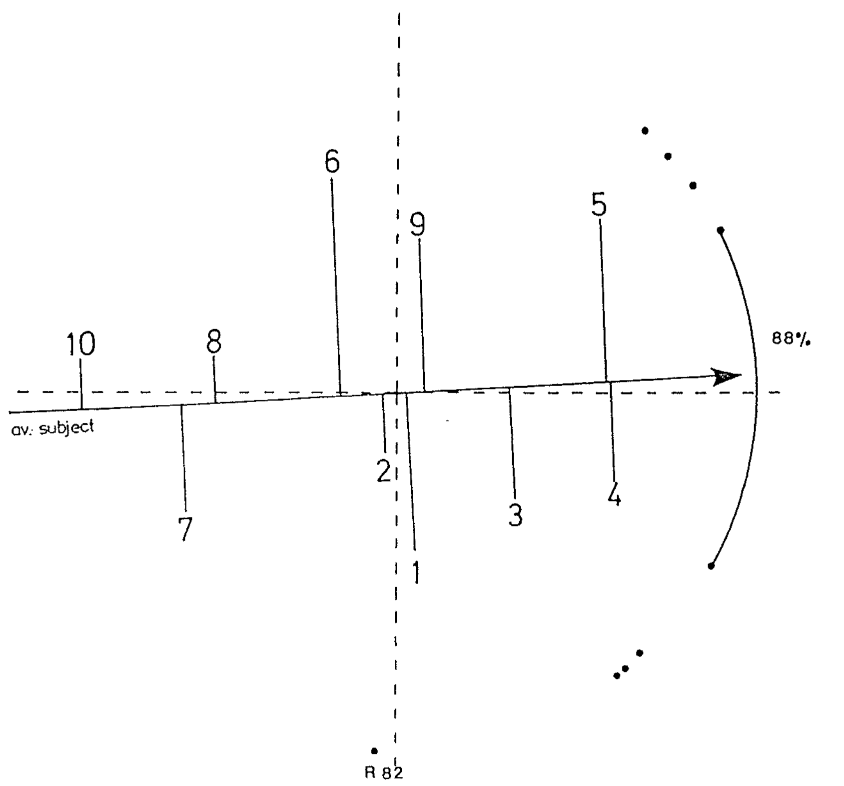


Fig.3.4.14.4 MDPREF 96 Configuration: All Respondents With a MEDIUM level of Environmental Experience (NLVF = medium)

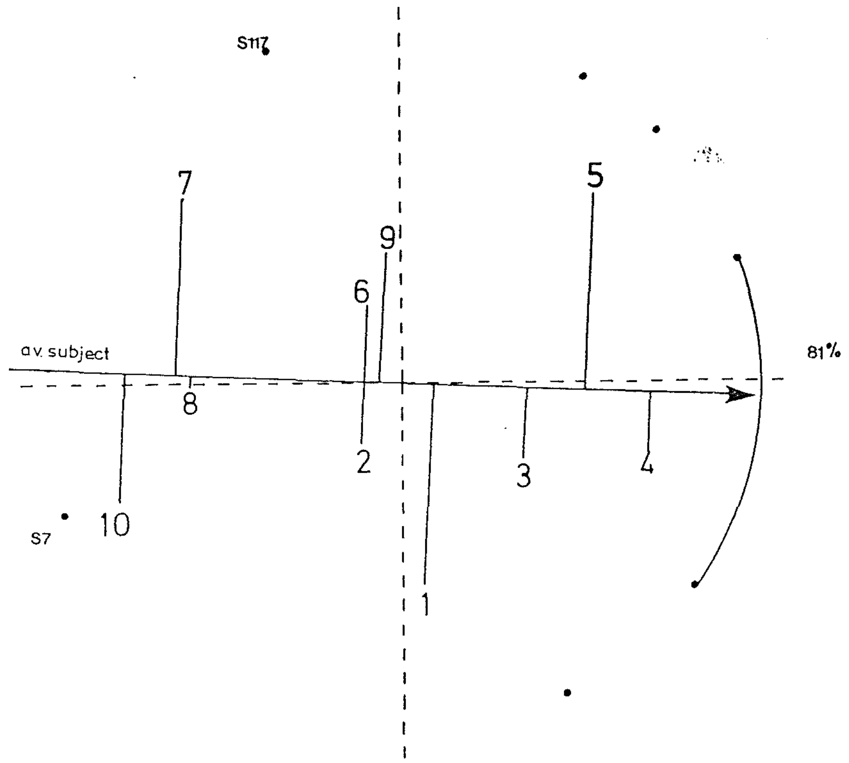


Fig.3.4.14.5 MDPREF 97 Configuration: All Respondents with a HIGH level of Environment Experience (NLVF = High)

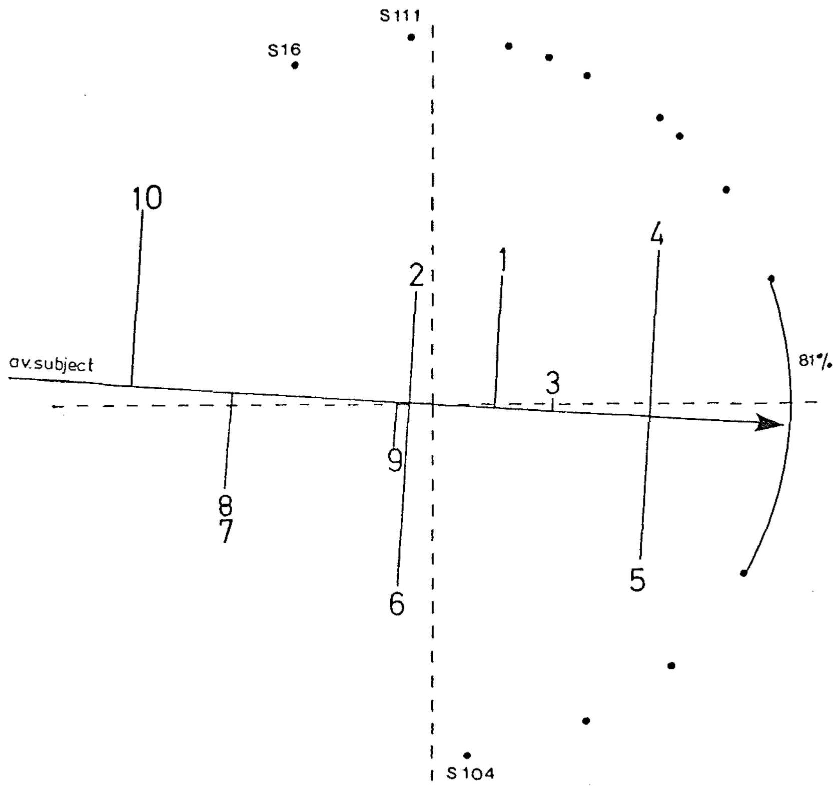


Fig.3.4.14.6 MDPREF 98 Configuration: All Respondents With VERY HIGH level of Environmental Experience (NLVF = Very High)

Figure 3.4.14.7 Effect of Differing Levels of Environmental Experience

(Non-local visiting frequency NLVF)

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
93	All housebound respondents	10 8 6 7 2 9 1 3 4 5
94	All respondents with very low NLVF	10 7 8 6 9 1 2 3 5 4
95	All respondents with low NLVF	10 7 8 6 9 2 1 3 5 4
96	All respondents with medium NLVF	10 7 8 6 2 1 9 3 5 4
97	All respondents with high NLVF	10 7 8 6 2 9 1 3 5 4
98	All respondents with very high NLVF	10 8 7 9 2 6 1 3 4 5

3.4.15 An Investigation Of The Effect Of Non-Local Visiting Frequency On Rotherham and Slough Residents' Preference Judgements

This inquiry further explores the theme of the preceding investigation which examines the effect of environmental experience on residents' preference judgements. The purpose of this investigation is to determine whether or not the relationship may be replicated in MDPREF scaling results for separate Rotherham and Slough residents' groups, with different non-local visiting frequencies. Replication would indicate that the relationship truly exists, but if it is not possible, the earlier findings could only be explained as a spurious result produced by the particular aggregate resident groupings used in those MDPREF scaling programmes or some other unknown influence.

This investigation refers to programmes:

MDPREF 99. - Rotherham housebound residents (figure 3.4.15.1)
MDPREF 100. - Rotherham residents with NLVF = Very low (figure 3.4.15.2)
MDPREF 101. - Rotherham residents with NLVF = Low (figure 3.4.15.3)
MDPREF 102. - Rotherham residents with NLVF = Medium (figure 3.4.15.4)
MDPREF 103. - Rotherham residents with NLVF = High (figure 3.4.15.5)

MDPREF 104. - Rotherham residents with NLVF = Very High (figure 3.4.15.6)

MDPREF 105. - Slough housebound residents (figure 3.4.15.7)

MDPREF 106. - Slough residents with NLVF = very low (figure 3.4.15.8)

MDPREF 107. - Slough residents with NLVF = low (figure 3.4.15.9)

MDPREF 108. - Slough residents with NLVF = medium (figure 3.4.15.10)

MDPREF 109. - Slough residents with NLVF = high (figure 3.4.15.11)

MDPREF 110. - Slough residents with NLVF = very high (figure 3.4.15.12)

The MDPREF programmes analysed are depicted in the figures specified above.

3.4.15.1 A Comparison of Results: Rotherham and Slough residents' groups with different non-local visiting frequencies

Two dimensional MDPREF scaling is adequate for all but one resident group. In the Slough housebound residents group, dimensions one and two represent only 50% of the total data variance, compared with 64% - 87% in the other residents' groups (see Table 3.3.2.5). The Slough housebound residents' group would be better represented in three dimensional scaling.

Rotherham and Slough groups' overall subject-vector termini preference ranges vary considerably before and after the subject-vector extremes are discounted but do not exhibit any discernable pattern. There appears to be no relationship between the overall subject-vector preference judgements and non-local visiting frequencies throughout either the Rotherham, or Slough groups. Preference ranges do not increase as non-local visiting frequencies increase as they do in the preceding investigation. Although housebound residents in Rotherham and Slough demonstrate the least varied preference judgements, different residents groups have the most varied preferences. In Rotherham, residents with a very low non-local visiting frequency have the most varied preference range but in Slough, residents with a very high non-local visiting frequency have the most varied preferences.

The discounted vector extremes are: R14, R19 and S21 in the housebound residents groups; R81, S24 and S120 in the very low visiting frequency groups; R17 and S26, S59 and S110 in the low frequency groups; R82 in the medium frequency groups; S7 in the high frequency group; and R113, S16 and S111 in the very high non-local visiting frequency groups.

The extent of the range covered by a concentration of subject-vector termini varies throughout the Rotherham and Slough groups, but there appears to be no relationship with the level of non-local visiting frequency (see Table 3.4.15). The preference consensus ranges do not decrease as the non-local visiting frequencies increase, as they do in the preceding investigation. Although housebound residents in Rotherham and Slough have the least varied preference consensus ranges, different residents' groups have the most varied ranges. In Rotherham, residents with a very low non-local visiting frequency have the most varied preference consensus, but in Slough, residents with a medium non-local visiting frequency have the most varied preference consensus. For all Rotherham groups, and the majority of Slough groups, the proportion of total subjects represented by the consensus range is high (60% - 100%). However, Slough housebound residents, and those with a high non-local visiting frequency have preference consensus ranges which represent only 50% and 40% of the total group's subjects.

There are a number of differences between the groups' average subject-vector stimuli projection orders, although fewer differences exist between the different Rotherham residents groups than between the different Slough residents' groups (see figures 3.4.15.13 and 3.4.15.14). Most variations occur between the middle preference range stimulus points 2, 6 and 9. Stimuli clusters of points 3 and 5, points 10, 7 and 8 and points 6,2 and 9 are common on the Rotherham groups' average subject vectors, but only the stimulus points cluster 7 and 8 is found on the majority of Slough average vectors. The three clusters of stimuli observed in earlier investigations (between least preferred, middle-preference and most preferred stimuli) are clearly discernable along only two average vectors; the Rotherham residents, medium non-local visiting frequency group average vector; and the Slough residents, very high non-local visiting frequency group average vector.

3.4.15.2 Investigation Results Summary

(i) Two dimensional MDPREF scaling is suitable for all but the Slough housebound residents group which would be better represented by three dimensional scaling; 64% of the total data variance is represented by dimensions one, two and three in this group.

(ii) There appears to be no relationship between visiting frequency and overall preference judgements. Neither does there appear to be any relationship between visiting frequency and preference consensus variation.

(iii) For the majority of Rotherham and Slough residents groups, a large proportion of the total subjects is represented by the preference consensus range.

(iv) Rotherham and Slough residents groups' average subject vector stimuli projection orders are dissimilar, although a number of common stimuli clusters occur along the majority of the Rotherham groups' average vectors. The stimuli clusters of points observed in earlier investigations are discernable on only two average vectors.

(v) The results of this investigation reveal no relationship between environmental experience (measured as non-local visiting frequency) and preference judgement groups of Rotherham and Slough respondents. The relationship between environmental experience and preference judgements observed in the preceding investigation is not replicated in this inquiry. One must therefore conclude that the apparent relationship indicated by that inquiry is either a spurious product of the resident groupings used in that particular set of MDPREF scaling programmes, or a result of unidentified factor interference included by chance within the data set.

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes (measured as degrees of a circle)	Overall pref. range excluding vector extremes (measured as degrees of a circle)	Preference consensus range (A) (measured as degrees of a circle)	% of group represented by A
99	Rotherham housebound respondents	79	171	28	28	60
100	Rotherham respondents with very low level of non-local visiting frequency. (NLVF)	74	307	121	64	80
101	Rotherham respondents with low level NLVF.	76	105	82	45	73
102	Rotherham respondents with medium level NLVF.	84	310	57	25	83
103	Rotherham respondents with high level NLVF.	87	50	50	50	100
104	Rotherham respondents with very high level NLVF.	81	120	86	45	82
105	Slough housebound respondents	50	311	76	14	50
106	Slough respondents with very low level NLVF.	69	308	67	30	73
107	Slough respondents with low level NLVF.	71	310	112	56	79
108	Slough respondents with medium level NLVF.	70	85	85	85	100

Table 3.4.15 (Part One) MDPREF Summary of Rotherham and Slough Respondents with Differing Levels of Environmental Experience (NLVF)

MDPREF Prog.No.	Respondent Group	2D Variance (%)	Overall pref. range including vector extremes	Overall pref. range excluding vector extremes	Preference consensus range (A)	% of group repre-sented by A
			(measured as degrees of a circle)			
109	Slough respondents with high level NLVF	64	260	150	26	40
110	Slough respondents with very high level NLVF	72	195	163	53	75

Table 3.4.15 MDPREF Summary of Rotherham and Slough Respondents with Different Levels (Part Two) of Environmental Experience (NLVF)

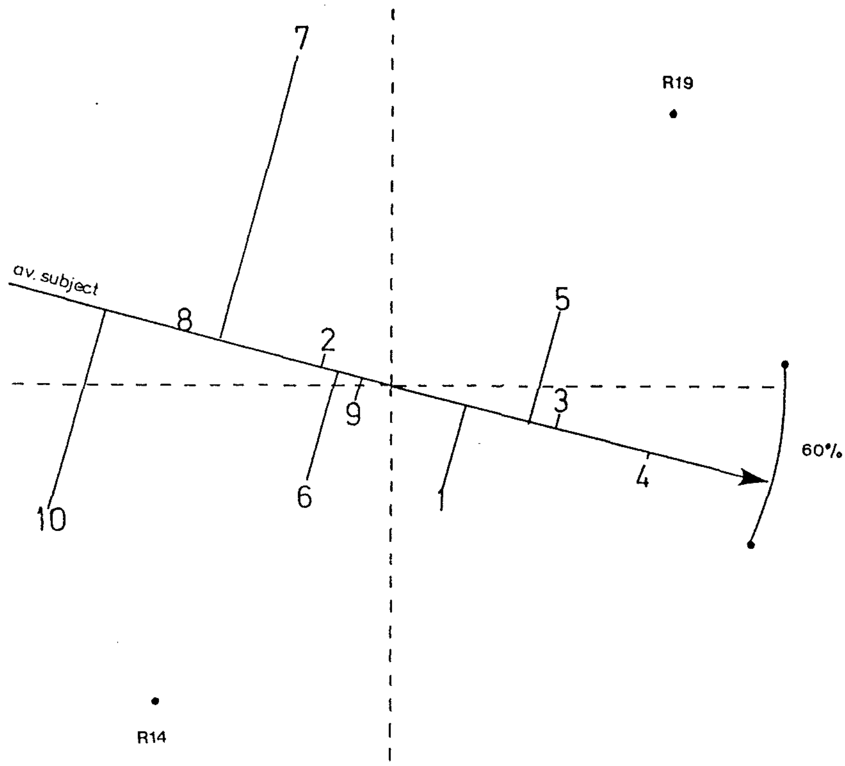


Fig.3.4.15.1 MDPREF 99 Configuration: Rotherham Housebound Respondents

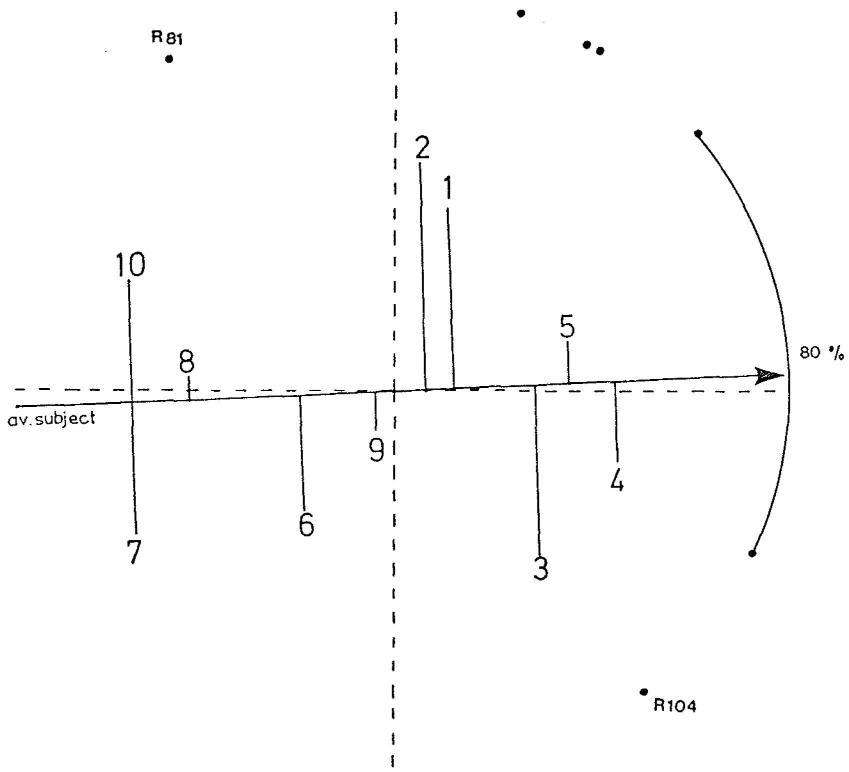


Fig.3.4.15.2 MDPREF 100 Configuration: Rotherham Respondents With A VERY LOW level of Environmental Experience (NLVF = Very Low)

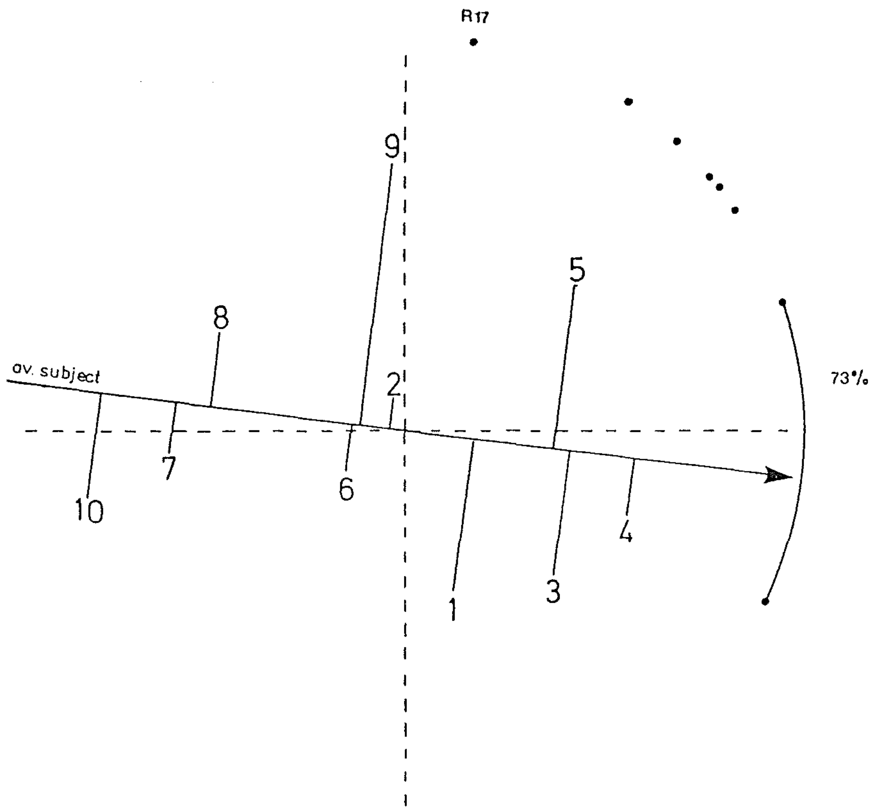


Fig.3.4.15.3 MDPREF 101 Configuration: Rotherham Respondents With a LOW level of Environmental Experience (NLVF = Low)

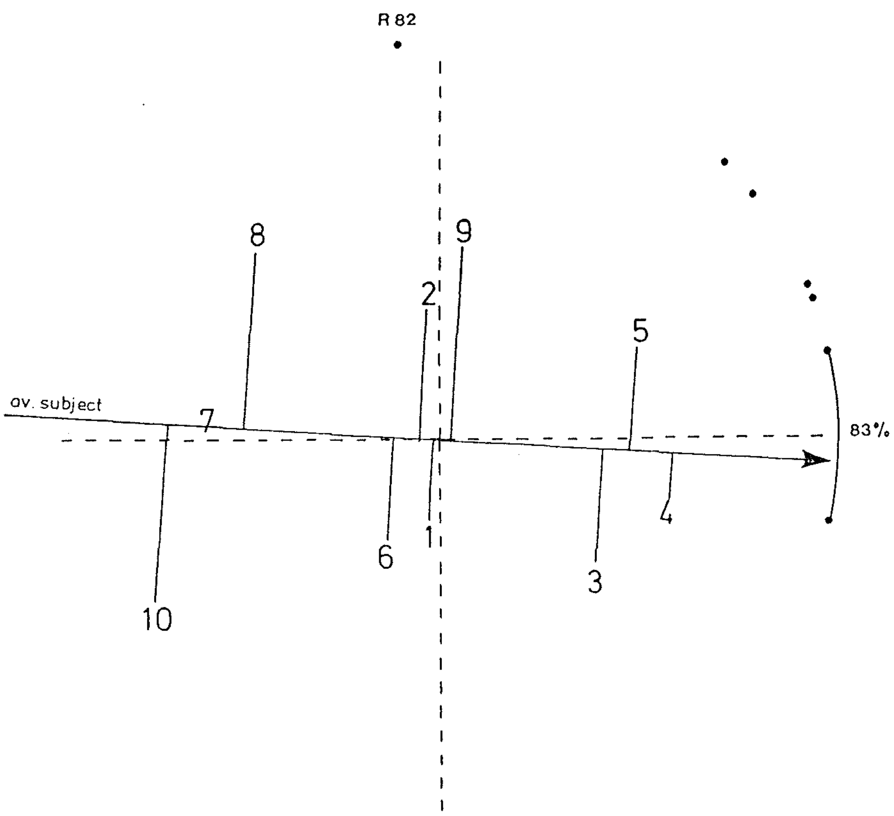


Fig.3.4.15.4 MDPREF 102 Configuration: Rotherham Respondents with a MEDIUM level of Environmental Experience (NLVF = Medium)

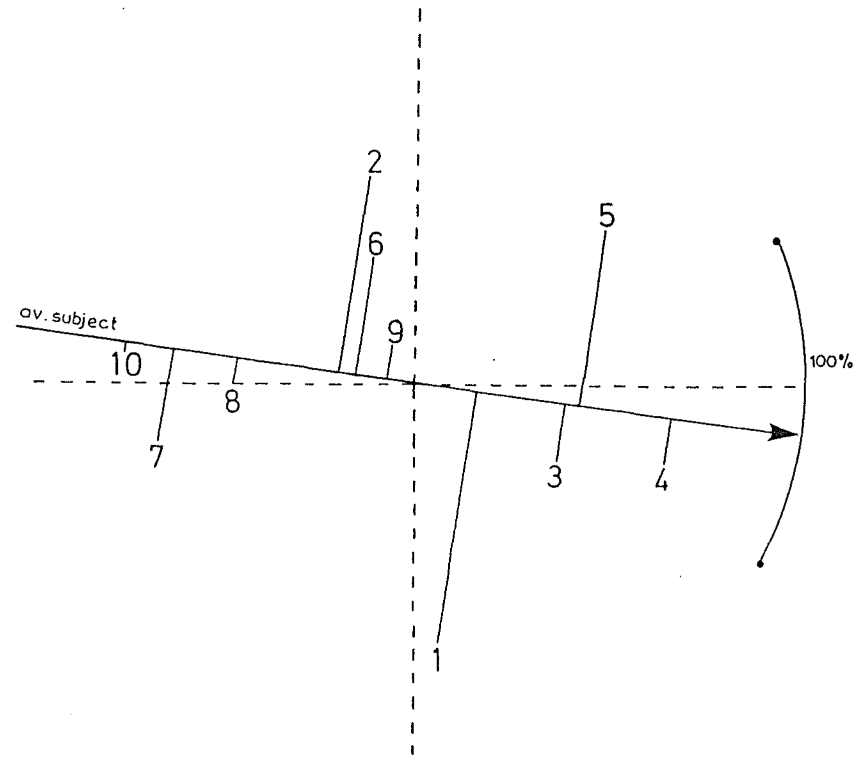


Fig.3.4.15.5 MDPREF 103 Configuration: Rotherham Respondents With a HIGH level of Environmental Experience (NLVF = High)

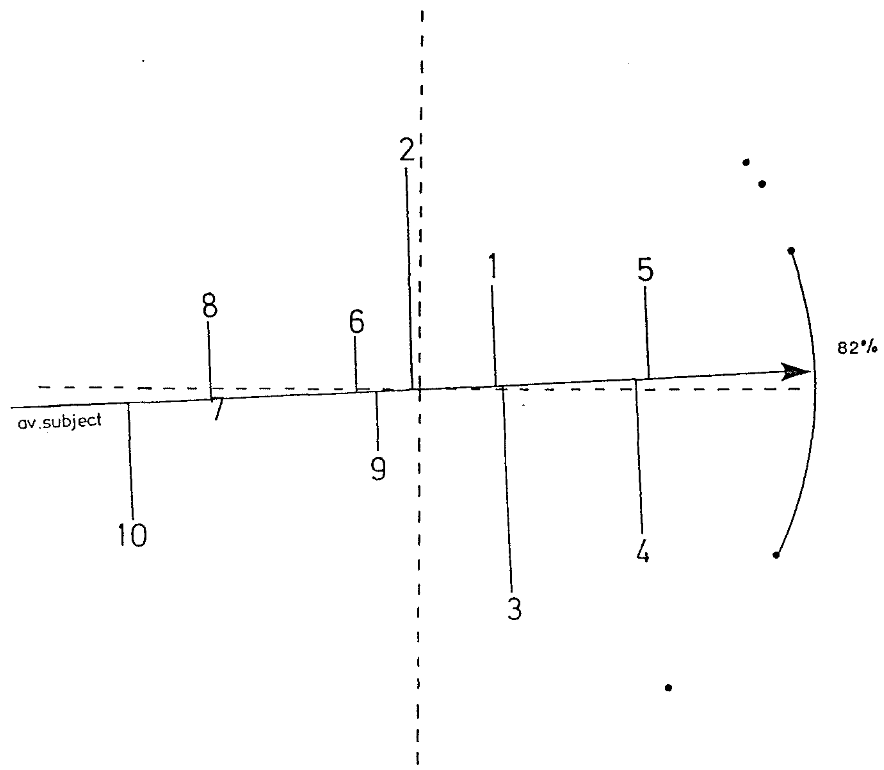


Fig.3.4.15.6 MDPREF 104 Configuration: Rotherham Respondents With a VERY HIGH level of Environmental Experience (NLVF = Very High)

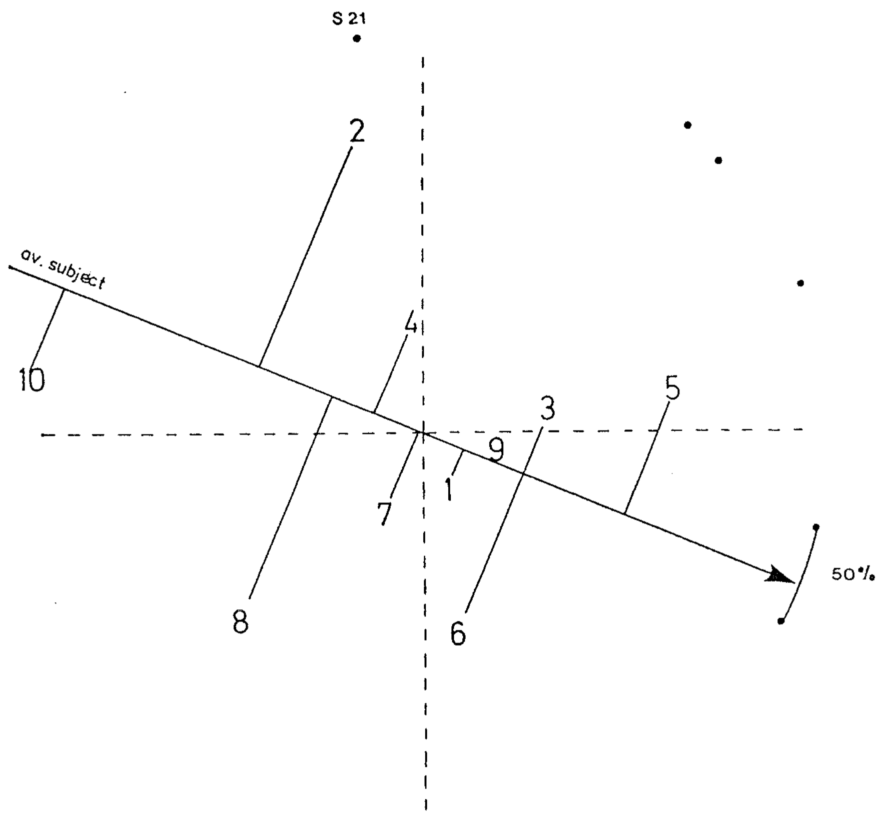


Fig.3.4.15.7 MDPREF 105 Configuration: Slough Housebound Respondents

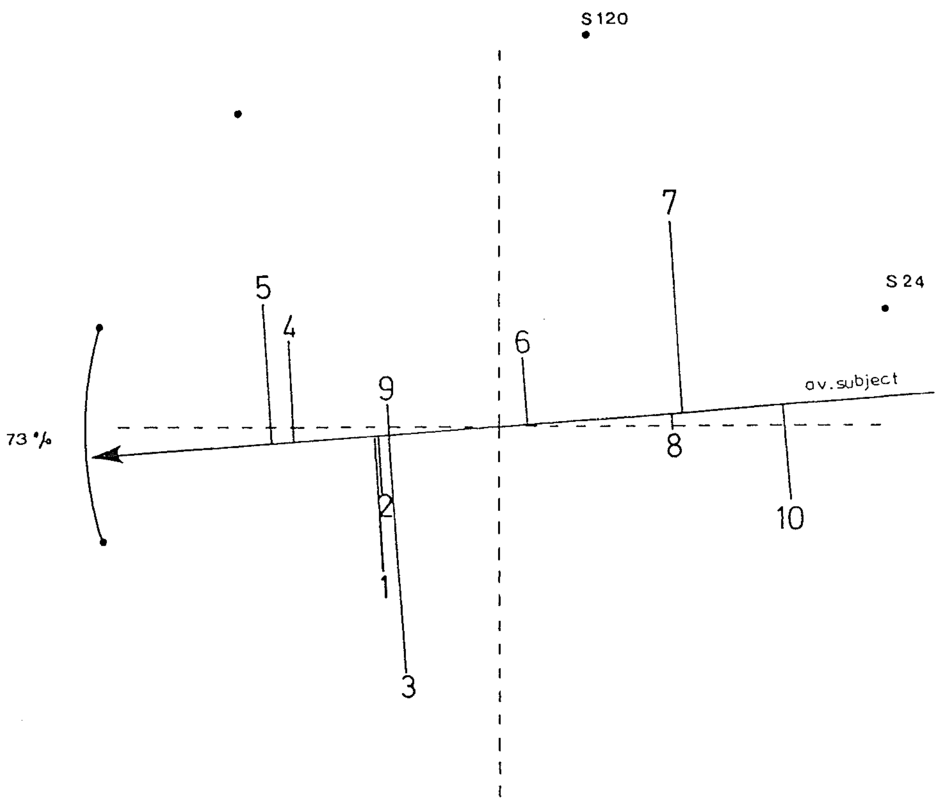


Fig.3.4.15.8 MDPREF 106 Configuration: Slough Respondents With a VERY LOW level of Environmental Experience (NLVF = Very Low

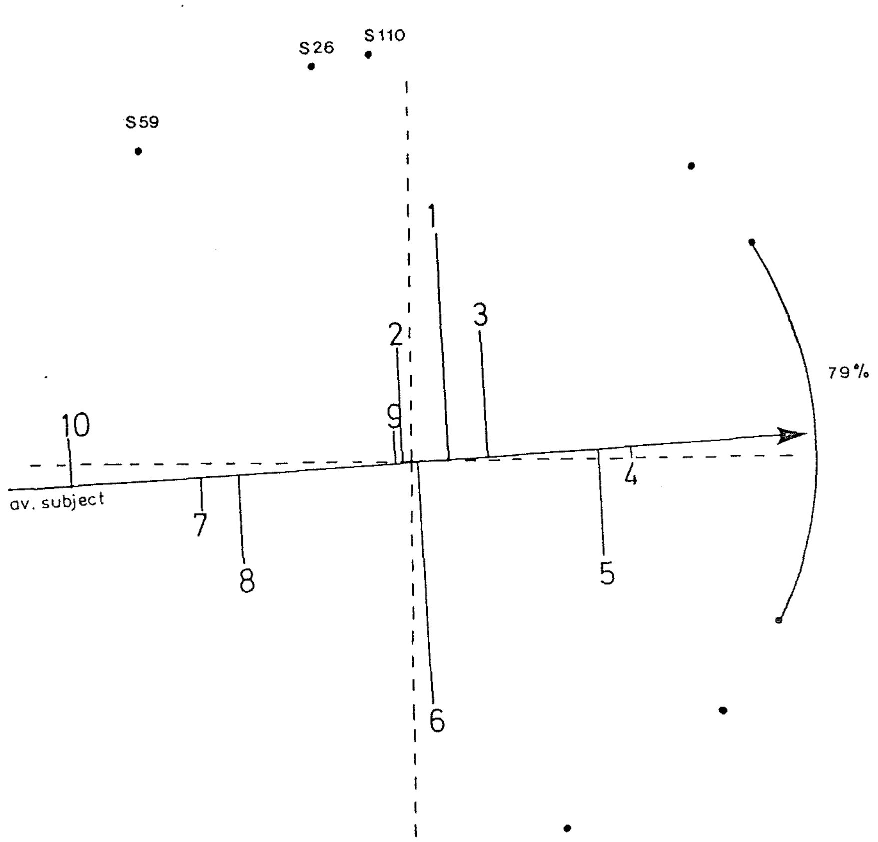


Fig.3.4.15.9 MDPREF 107 Configuration: Slough Respondents With a LOW level of Environmental Experience (NLVF = Low)

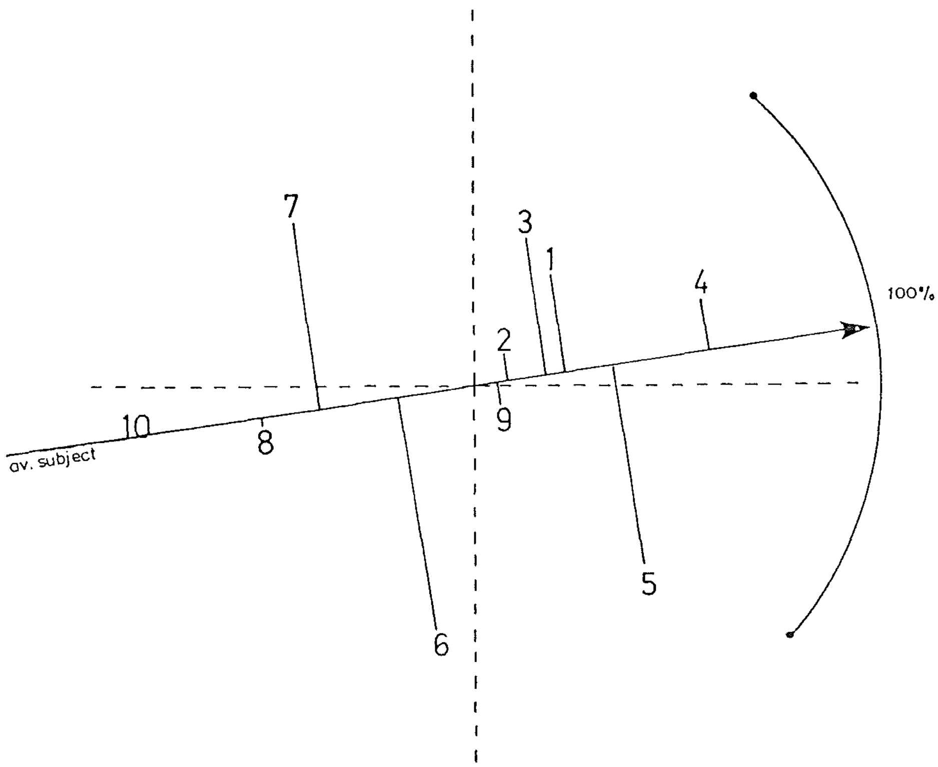


Fig.3.4.15.10 MDPREF 108 Configuration: Slough Respondents With a MEDIUM level of Environmental Experience (NLVF = Medium)

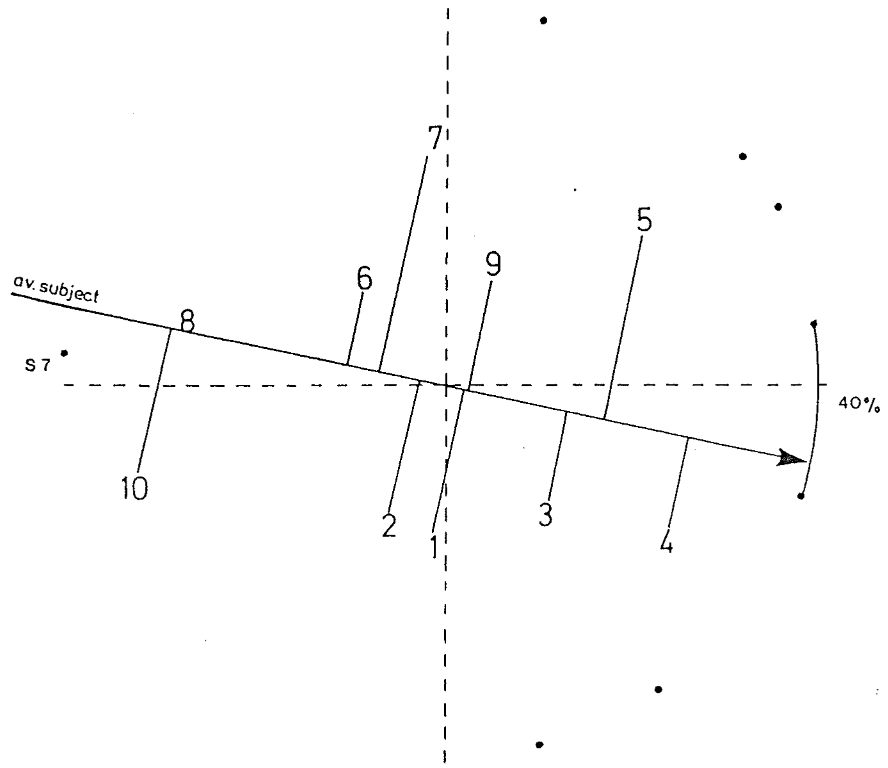


Fig.3.4.15.11 MDPREF 109 Configuration: Slough Respondents in a HIGH level of Environmental Experience (NLVF = High)

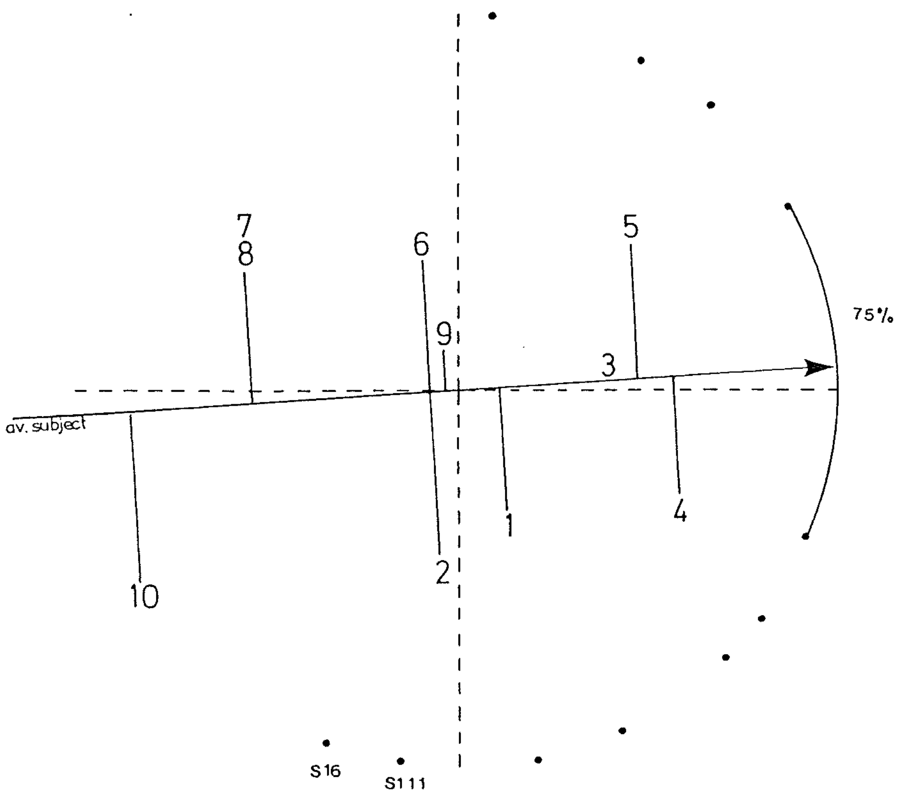


Fig.3.4.15.12 MDPREF 110 Configuration: Slough Respondents With a VERY HIGH level of Environmental Experience (NLVF = Very high)

Table 3.4.15.13 Effect of Differing Levels of Environmental Experience (Non-Local Visiting Frequency NLVF) On Rotherham Respondents

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction →)
99	Rotherham housebound respondents	10 8 7 2 6 9 1 5 3 4
100	Rotherham respondents with very low NLVF	7 10 8 6 9 2 1 3 5 4
101	Rotherham respondents with low NLVF	10 7 8 6 9 2 1 5 3 4
102	Rotherham respondents with medium NLVF	10 7 8 6 2 1 9 3 5 4
103	Rotherham respondents with high NLVF	10 7 8 2 6 9 1 5 3 4
104	Rotherham respondents with very high NLVF	10 8 7 6 9 2 1 3 5 4

Figure 3.4.15.14 Effect of Differing Levels of Environmental Experience (Non-local Visiting Frequency NLVF) on Slough Respondents

MDPREF NO.	Respondent Groups	Stimuli Projections (preference direction ⟶)
105	Slough housebound respondents	10 2 8 4 7 1 9 3 6 5
106	Slough respondents with very low NLVF	5 4 1 2 9 3 6 8 7 10
107	Slough respondents with low NLVF	10 7 8 2 9 6 1 3 5 4
108	Slough respondents with medium NLVF	10 8 7 6 9 2 3 1 5 4
109	Slough respondents with high NLVF	10 8 6 7 2 9 1 3 5 4
110	Slough respondents with very high NLVF	10 7 8 6 2 9 1 3 5 4

3.5 Summary of Results

This section summarises the results of the MDPREF scaling investigations described in the preceding section (3.4).

Only three of the nine variables which were considered likely to influence respondents' preference judgements (see 3.1) appear to do so. The variables are the respondents' town of residence, sex and age.

The influence of the town of residence on preference judgements was first demonstrated in 3.4.1, where the Slough respondents exhibited more varied overall preference judgements and preference consensus ranges than the Rotherham respondents group. The influence of this variable was also observed in subsequent investigations including the town of residence, sex, age and residence satisfaction variables (see 3.4.2, 3.4.5, 3.4.6 and 3.4.12).

Respondent sex affects preference judgement in such a way that the female respondent groups of the interview towns always displayed more varied overall preference judgements and preference consensus ranges than the male groups (see 3.4.2, 3.4.4, 3.4.6, and 3.4.8). In the MDPREF scaling analysis, the Slough female group exhibited the most varied preference ranges, followed by the Slough male group, the Rotherham female group and lastly the Rotherham male group, which displayed the least varied preference ranges. These results show that the respondents' town of residence has a greater effect upon preference judgements than the respondent sex variable.

Respondent age affects preference judgements, but it s influence is distorted. In the first investigation involving age (3.4.3), younger respondent groups exhibited more varied overall preference and preference consensus ranges than older age groups. In subsequent inquiries, this effect of age on preference judgements was shown to be limited to particular respondent groups, all female groups (see 3.4.4) and Slough male and Slough female groups (see 3.4.5 and 3.4.6). In the last 'age-effect' investigation (3.4.6) Rotherham male and female groups preference consensus ranges increased as the respondent age groups increased in years but the opposite pattern occurred in the Slough results; the preference consensus ranges of Slough male and female respondents decreased, as the respondent age groups increased in years. These results indicate that the effect of age is limited to the preference judgements of specific groups of respondents, unlike the town and sex variables which influence all respondent groups tested.

The six variables which do not appear to affect residents' preference judgements are: indigenous and non-indigenous residence; length of non-indigenous residence; socio-economic status; satisfaction and dissatisfaction with living in the interview town; favourable and unfavourable attitude towards the appearance of the interview town; and environmental experience.

In the Rotherham results, indigenous respondents exhibited the most varied overall preference range, but in Slough non-indigenous respondents had most varied preferences (3.4.7).

The period of residence in Rotherham or Slough by non-indigenous residents does not appear to affect preference judgements (see.3.4.9). Variations in the overall preference judgement and preference consensus ranges could not be related to residents' different periods of residence in Rotherham or Slough.

Initially socio-economic status did appear to influence preference judgements (3.4.10); higher socio-econonic groups exhibited more varied overall preference judgements and consensus ranges than lower socio-economic groups. However in subsequent inquiries (3.4.11 and 3.4.12) this pattern was not replicated and the results provided no evidence to support the hypothesis that socio-economic status influences preference judgements. When the Rotherham and Slough socio-economic groups were ranked according to status, some similarities were observed between the Rotherham and Slough preference consensus ranges. But as the MDPREF analyses provided no further evidence to link socio-economic status with variations in preference judgements, the similarities were concluded to be a spurious product of the respondent groupings used in the MDPREF scaling programmes for that investigation.

Residents' satisfaction and/or dissatisfaction with living in the interview towns does not affect preference judgements in favour of, or against, local townscape views (3.4.12). In the Rotherham sample, dissatisfied residents had the most varied overall preference judgements and consensus ranges but in the Slough sample, satisfied residents displayed the most varied preference ranges.

Respondents' favourable or unfavourable attitudes towards the appearance of the interview town were also shown not to influence preference judgements in favour of, or against, local townscape views (3.4.13). In the Rotherham sample, residents with favourable attitudes had the most varied overall preference judgement and consensus ranges but in the Slough sample, residents with unfavourable attitudes exhibited the most varied preference ranges.

Environmental experience, measured as respondents' non-local visiting frequency does not affect preference judgements. The frequency level was determined as the frequency with which a respondent leaves the interview town to visit other towns, rural, coastal and foreign destinations.

In the first investigation involving environmental experience (3.4.14), a positive relationship was observed; the respondents' preference range increased as the level of environmental experience increased (non-local visiting frequency). This pattern was not replicated in when MDPREF scaling was performed on Rotherham and Slough respondent groups with varying levels of environmental experience (3.4.15). It was therefore concluded that effects observed in the preceding investigation (3.4.14) were spurious and a product of the particular respondent groupings used in the MDPREF programmes for that investigation.

The order of the stimuli projections along the respondent groups' average subject vectors varied slightly but several similarities were observed in a large number of the respondent groups' MDPREF scaling results. Along the majority of respondent groups' average vectors, stimulus 10 (the derelict Parkgate industrial site) was the least preferred of the ten environmental stimuli, stimuli 7 and 8 were considered to be slightly more preferable. The order of these two points varied, in some cases stimulus 7 (the row of derelict Victorian terraced houses, Rotherham) was preferred stimulus 8 (the derelict shops and houses at Crown Corner, Slough), but in other cases, this order was reversed.

The middle stimuli preference range order usually consisted of stimuli 6, 2, 9 and 1 (Queensmere shopping centre (Slough) Eastwood industrial estate Rotherham, the derelict site along Frederick Street (Rotherham) and the Slough industrial estate respectively). The position order of this range of stimuli varied most frequently.

On the majority of the groups' average vectors, stimulus 4 (Civic Offices, Rotherham) was the most preferred of the ten stimuli. Stimuli 3 (Rotherham bus station) and 5 (Slough High Street) were usually the second and third most preferred stimuli. The position order of stimulus 3 and 5 was sometimes reversed and in some cases, the stimuli were located within the middle preference range order.

Three distinct clusters of stimuli were observed on the majority of the respondent groups' average vectors. The clusters consist of the three least preferred stimuli points 10, 8 and 7, the middle preference stimuli points 6, 2, 9 and 1 and the most preferred stimuli cluster of points 3,5 and 4. In some cases, when the three clusters were not in evidence along the average subject vectors, one or more, smaller clusters of stimuli could be observed. For example, groupings of stimuli 7 and 8, points 3 and 5 and points 6,2 and 9 were noted. Along some groups' average vectors, the middle and most preferred stimuli clusters were not clearly discernable from one another. Sometimes stimulus 3 would appear with the middle preference cluster rather than the most preferred cluster, and stimulus 1 (usually adjacent to stimulus 3) would appear with the most preferred stimuli cluster, rather than the middle preference cluster.

Two dimensional MDPREF scaling accounted for over 60% of the total data variance in all but two of the respondent groups subjected to MDPREF scaling analysis see Table 3.3.2.6. The two exceptions are the housebound respondents group (MDPREF 93) and the Slough housebound residents group (MDPREF 105). Apart from these groups, two dimensional scaling was quite adequate especially as 90% of the respondent groups subjected to 2D scaling, represented over 65% of the groups' total data variance, see Table 3.3.2.6.

This chapter has shown that multidimensional scaling can be successfully employed to assess the nature and extent of the influence of particular variables, on respondent s preference judgements. The proportion of the data variance represented by the two-dimensional scaling analysis was high for most respondent groups. Three variables, town of residence, respondent sex and age, were seen to influence preference judgements and perhaps more importantly, there was a large degree of consensus on the stimuli preference order and clusterings along the average subject vectors of many respondent groups. In most cases, three quite distinct stimuli clusters could be observed. The least preferred most unattractive group (stimuli 10, 8 and 7), the middle preference cluster (stimuli 6, 9, 2 & 1) and the most preferred least unattractive group (stimuli 5,3, and 4).

CHAPTER FOUR:

Analysis of Preference Explanations

4. Introduction

During the course of the preference test, respondents were asked to explain their preference selections, this chapter analyses those explanations.

The explanations of respondents' photographic preferences were required to ascertain the criteria used to assess unattractive townscape views. Respondents were not expected to supply a complete range of preference assessment criteria. Indeed, some interviewees could not express verbally, why they preferred one photograph to another. The objective of the study is not to identify the complete range of preference criteria used to assess townscape photographs, but attempts to identify some of the perceptual constructs common to groups of individuals viewing a set of townscape photographs. As such, the examination of the preference explanations is intended to provide a useful starting point at which to begin interpreting the perceptual dimensions employed in the assessment of unattractive townscapes.

In Chapter Three, the respondent's town of residence is shown to have a considerable influence upon the sample's preference judgements. For example, Slough residents exhibit more varied overall preference judgement and preference consensus ranges than groups of Rotherham residents. The first and second analysis sections of this chapter, seek explanations for such preference variations. The first section (4.2) analyses preferences explanations provided by Rotherham and Slough respondents, and the second section examines preference explanations supplied by respondents from only one of the interview towns. The third and final section of this chapter links the multidimensional scaling results of Chapter Three with the preference explanations data. It considers the stimuli projection clusters along the MDPREF configurations average subject vectors and attempts to interpret the clusters by using the respondents preference explanations. In the majority of respondent groups' MDPREF configurations, the ten environmental stimuli form three distinct clusters. The least preferred stimuli cluster consists of stimulus points 10, 8 and 7; the middle preference range cluster consists of points 6,2, 9 and 1; and the most preferred cluster consists of stimulus points 3,5 and 4. A description of the means of collating and categorising the preference explanations data precedes the three analyses sections.

4.1 Collation and Categorisation of the Preference Explanations

In the preference test, each respondent was shown ten different townscape photographs arranged in a random order of forty-five different pairing combinations. Respondents were asked to select the one photo of each pair they 'preferred to look at as a view', and say 'why' they preferred it. A variety of different responses resulted. In some cases respondents were unable to say why they preferred one photograph to another, or found it difficult to express verbally, the exact reasoning behind their preference selections. The number of preference explanations supplied by the respondents varies. Most of the explanations were provided when each photograph was presented to the respondent for the first time. As the test progressed, and the same photographs were displayed again and again, in different pairing combinations, the respondents displayed a tendency to repeat the explanations they had already supplied. In some cases, new preference explanations were provided only after the respondents had viewed the photographs many times before.

For each respondent, a separate preference response sheet listed the explanations and paired-stimuli preference selections. The data was collated, sorted and analysed by hand. Computer analysis was considered, but rejected on the grounds that it would involve such a lengthy post-coding operation, it would be less time consuming to process the data by hand.

The preference explanations supplied, were sorted according to the environmental stimuli (townscape photographs) they referred to; any explanations that a respondent had repeated for a particular stimuli, were deleted. Two hundred and forty preference explanation data sheets (one for each respondent) were thus produced. Each sheet listed the preference explanations supplied by each respondent for each of the ten photographs assessed. In order to facilitate analysis,the plethera of preference explanations data was condensed. Explanations were categorised according to the aspects of the environmental stimuli: they referred to, using the following categorisation:

(i) Visual aspects:

- lighting
- colour
- style
- condition
- motion and activity
- aesthetics
- contents description

(ii) Sensory aspects:

- audio
- smell
- tactile

(iii) Economic function

(iv) Emotions (or feelings) evoked

(v) Photographic quality and technical composition

(vi) Weather

(vii) Location

(viii) Recommendations

(ix) Familiarity

(x) Representativeness of the real-life view

(xi) Comparisons

(xii) Dislike

(xiii) Other reasons

Since the preference test employed solely visual environmental stimuli it would have been reasonable to assume that the preference explanations supplied would only refer to the visual characteristics of the stimuli. However many explanations relate to the non-visual aspects of the views displayed indicating that the respondents perceived and assessed much more than just the visual qualities of the completely visual environmental stimuli employed. The respondents provided preference explanations which refer to a variety of non-visual aspects including: the economic function of the scene; the photographic quality and technical composition of the views; the weather; the known or supposed location of the scene; the familiarity or unfamiliarity of the view; the photographs representativeness of the known real-life scenes depicted; and comparisons with similar scenes in other places. Some photographs evoked strong favourable and unfavourable emotions. A number of the explanations relate to human sensory functions of smell, hearing and the tactile sensations of warmth and cold. In some cases respondents explained their preferences simply in terms of the content of the views displayed; so that responses such as 'only houses' or 'only industry' have been categorised as 'contents descriptions'. Other explanations are based on the future potential of the scenes displayed, when respondents made specific recommendations for improving particular views.

In order to make direct comparisons of the Rotherham and Slough respondents preference explanations for each of the ten photographs displayed, preference explanations had first to be listed, then the frequency of particular explanations counted. Preference explanations frequency tables and histograms for those explanations supplied by Rotherham and Slough respondents are included in section 4.2. The frequency results tables of explanations supplied by respondents from only one of the interview towns are displayed at Appendix III.

4.2 Analysis of the Rotherham and Slough Respondents' 'Identical' Preference Explanations

This section examines the 'identical' preference explanations provided by both Rotherham and Slough respondents during the preference test. It should not be confused with the analysis of 'different' preference explanations in section 4.3 where (different) explanations supplied by only one of the two respondent samples are examined.

The purpose of this analysis is to develop a better understanding of the assessment criteria used by respondents to make preference selections of photographs depicting unattractive townscapes. It determines which explanations were provided most frequently to explain preference selections for particular photographs, and or the entire set of photographs and whether the frequency varies significantly between the respondent samples. Each of the ten environmental stimuli are considered in turn and the differences between the Rotherham and Slough explanation frequencies are examined.

4.2.1 Rotherham and Slough Residents' (Identical) Preference Explanations In Response To Stimulus One: Slough Trading Estate

The histogram in figure 4.2.1 displays the explanation categories total frequencies for identical preference explanations supplied by both Rotherham and Slough respondents with respect to stimulus 1, the Slough trading estate. Table 4.2.1.2 shows the Rotherham and Slough categorised preference explanation frequencies for stimulus 1.

An examination of the ranked frequency categories for stimulus 1, (Table 4.2.1.1) reveals a considerable degree of simil arity between the Rotherham and Slough residents' identical preference explanations. For both resident samples, the 'condition' and 'style' categories have the first and second largest frequency counts. The 'condition' category frequencies are identical (62) for both groups. The greater part of this similarity may be attributed to the 'tidy/neat' preference explanation which accounts for almost half of the Rotherham (29) and Slough (30) residents' 'condition' category scores, see Table 4.2.1.2. The preference explanation 'clean' also displays significant frequency scores for Rotherham (11) and Slough (19). The 'lighting' and 'function' preference explanation categories possess similar frequency totals for the two respondent groups.

ROTHERHAM		SLOUGH	
Category	Frequency	Category	Frequency
Condition	62	Condition	62
Style	31	Style	19
Other	24	Function	11
Contents Description	23	Contents Description	11
Lighting	14	Lighting	10
Photo Quality	14		
Function	10	Other	9
		Photo. Quality	9
Activity/Motion	8	Aesthetics	8
Emotion	6	Emotion	8
Weather	6	Activity/Motion	5
Aesthetics	4	Weather	3
Audio	1	Audio	1

Table 4.2.1.1 Ranked order of preference explanation categories for Stimulus One: Slough Industrial Estate

Three explanation categories differ quite considerably in frequency total for Rotherham and Slough respondents. These categories are 'contents description', 'style' and 'other reasons'. In Table 4.2.1.2 it can be seen that most of the frequency variation occurs in the preference explanation 'only factories' (contents description category), 'open' (style) and 'dislike cooling towers' (other reasons category).

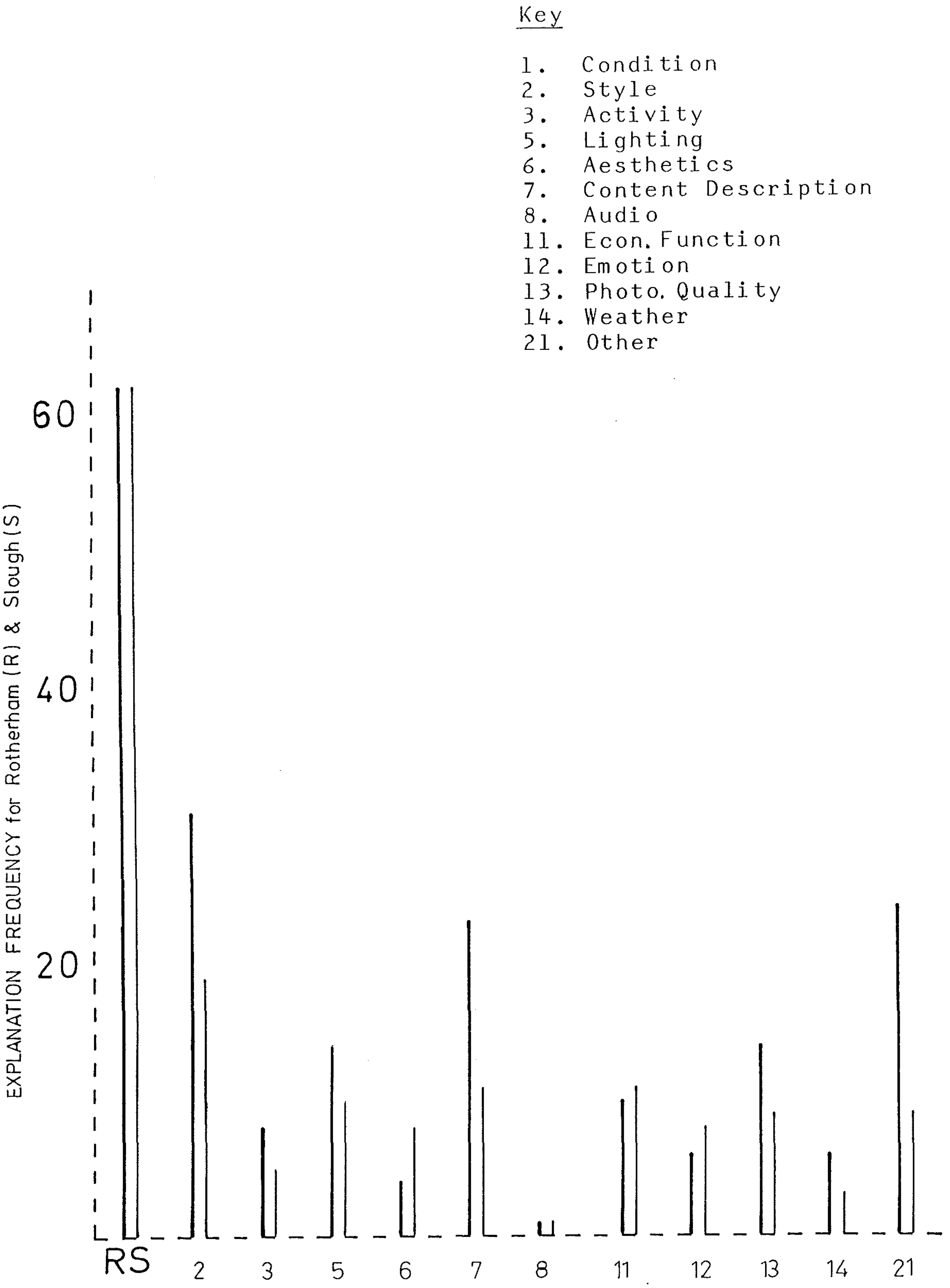


Fig.4.2.1 Histogram of 'Identical' preference explanations supplied by Rotherham & Slough Respondents in Response to Stimulus One: Slough Industrial Estate

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY Rotherham	FREQUENCY Slough
Condition	better kept	11	2
	developed completed/finished	8	1
	tidy/neat	29	30
	clean	11	19
	thriving	1	1
	dirty	1	3
	organised/ordered	1	6
Style	no tall buildings	2	3
	open space/not closed in	26	15
	modern/up to date	3	1
Activity	dead/no life/ no people	5	1
	livelier/activity	3	4
Lighting	light/bright	14	10
Aesthetic	nice/pleasant	4	8
Content Description	only factories	23	11
Audio	quiet	1	1
Econ. Function	useful/important	3	5
	work to be had	7	4
Emotion	factories interesting	2	3
	factories not interesting	3	4
	cheerful	1	1
Photo. Quality	distance/see further	13	8
	clear	1	1
Weather	nice/blue sky	6	3
Other	like cooling towers	4	1
	dislike cooling towers	15	5
	dislike fencing	2	2
	too much dust/factories	3	1

Table 4.2.1.2 Frequency table showing 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus are: Slough Industrial Estate.

4.2.2 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Two: Eastwood Trading Estate, Rotherham

The histogram in figure 4.2.2, displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to Stimulus 2, Rotherham Eastwood Trading Estate. Table 4.2.2.2 shows the categorised preference explanation frequencies for Stimulus 2.

A considerable degree of similarity exists between the Rotherham and Slough preference explanation category frequencies. Although the order of the first and second ranked 'condition' and 'style' categories are reversed in the Slough results (see Table 4.2.2.1), the 'style' category frequencies are very similar. Much of the likeness may be attributed to the 'open/space' preference explanation which accounts for the majority of the Rotherham (42) and Slough (47) frequency counts, see Table 4.2.2.2. Despite the varied frequency totals for the 'condition' categories, the preference explanations 'poorly-kept' and 'clean' account for a significant proportion of the Rotherham (61%) and Slough (44%) frequency total. Another similarity occurs in the 'colour' category. Very similar frequency counts for the preference explanation 'grass/green/fields' occur in the Rotherham (23) and Slough (29) results.

ROTHERHAM		SLOUGH	
Category	Frequency	Category	Frequency
Condition	67	Style	60
Style	56	Condition	50
Colour	24	Colour	31
Contents Description	19	Aesthetic	25
Lighting	18	Contents Description	11
Function	13	Lighting	11
Other	13		
Photo. Quality	12	Function	9
		Other	8
Comparisons	9	Activity/Motion	7
Recommendations	8	Recommendations	6
Aesthetics	8	Emotion	5
Activity/Motion	8	Photo. Quality	4
Emotion	7	Comparisons	4
Audio	1	Audio	3
Tactile	1	Tactile	1

Table 4.2.2.1: Ranked order of preference explanation categories for Stimulus Two: Eastwood Industrial Estate, Rotherham

The explanation categories 'condition' and 'aesthetic' differ most significantly in frequency totals. Table 4.2.2.1 reveals that the number of 'poorly-kept' (condition) and 'nice/pleasant' (aesthetic) preference explanations account for most of the variations.

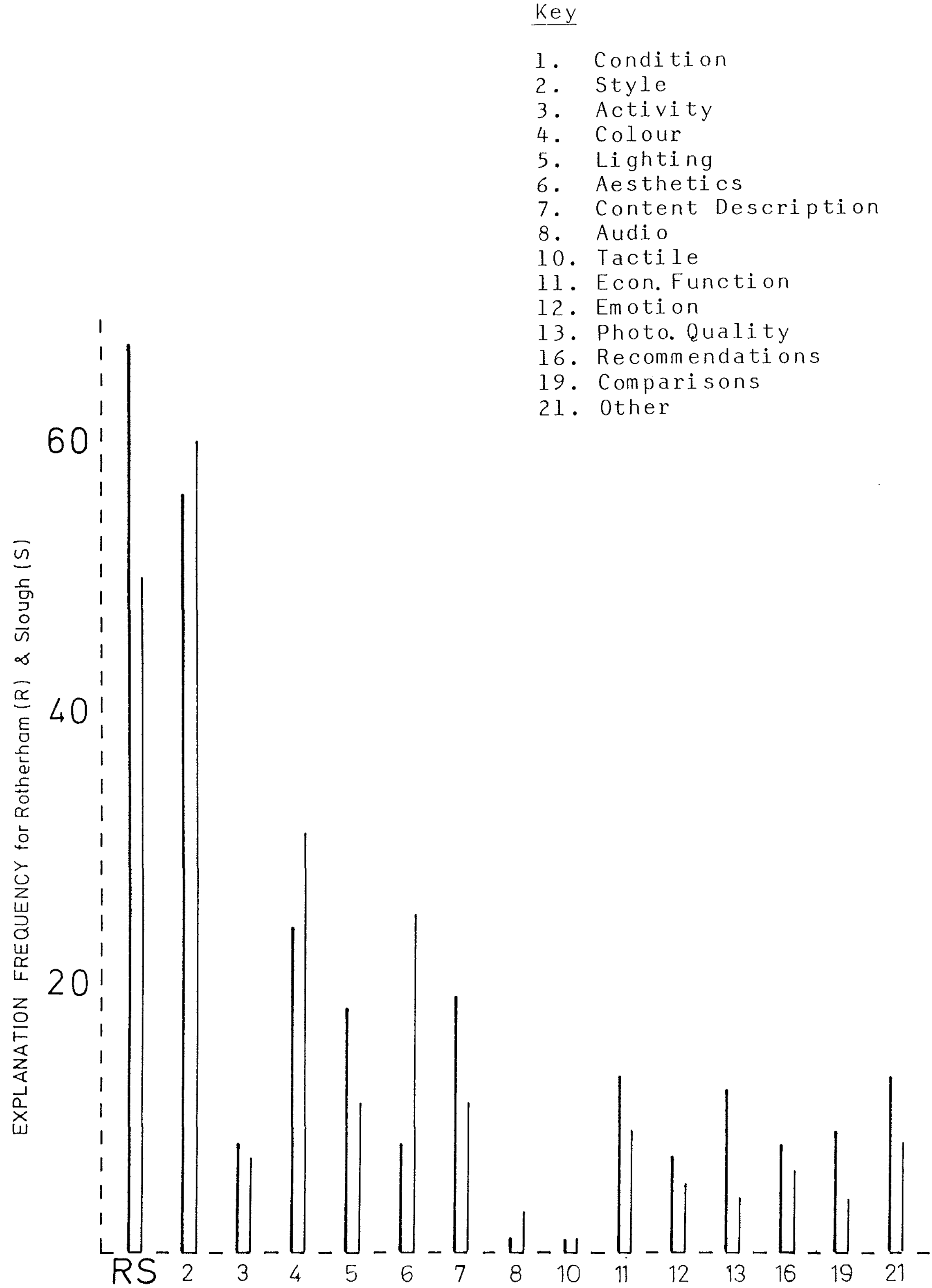


Fig.4.2.2 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Two: Rotherham (Eastwood) Industrial Estate

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY Rotherham	Slough
Condition	tidy	4	12
	not derelict	9	5
	clean	13	10
	poorly kept/overgrown/ neglected/scrubland	28	12
	untidy	6	10
	incomplete/unfinished	7	1
Style	new buildings	3	6
	modern	8	3
	not very built up/ spaced out buildings	3	4
	open/space	42	47
Activity	more happening/going on	5	1
	lifeless/no people	3	6
Colour	grass/green/fields	23	29
	same colour	1	2
Lighting	bright/light	18	11
Aesthetic	nice/pleasant/beautiful/ scenery attractive	4	14
	unpleasant/little to catch eye	3	8
	could walk/sit there	1	3
Content Description	less industry	1	1
	only factories	17	9
	no cooling towers	1	1
Audio	quiet	1	3
Tactile	bleak	1	1
Econ.Function	work to be had	7	4
	wasteland	6	5
Emotion	interesting	3	1
	not interesting	3	3
	cheerful	1	1
Photo. Quality	distance view/see further	11	3
	unclear	1	1
Recommendations	has potential/could be improved	4	3
	cut the grass	4	3
Comparisons	like a housing estate	1	1
	unlike an industrial estate	2	1
	like a concentration camp	6	2

Table 4.2.2.2 (Part One)

Other	dislike corrugated iron	1	2
	dislike fencing	4	2
	dislike gate	3	2
	no bill boards	4	1
	too flat	1	1

Table 4.2.2.2 (Part Two) Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to Stimulus Two: Rotherham (Eastwood) Industrial Estate.

4.2.3 Rotherham And Slough Residents' (Identical) Preference Explanations in Response to Stimulus Three: Rotherham Bus Station

The histogram in figure 4.2.3 displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to Stimulus 3, Rotherham Bus Station. Table 4.2.3.2 shows the categorised preference explanation frequencies for stimulus 3.

The general pattern portrayed in the ranked order of preference explanation categories (see Table 4.2.3.1) is one of similarity rather than variation between Rotherham and Slough results. The 'condition' category has the largest frequency total for both groups of residents and the 'style', 'lighting' and 'colour' categories possess the second, third and fourth largest frequencies, although their ranked order of frequencies varies.

ROTHERHAM			SLOUGH
Category	Frequency	Category	Frequency
Condition	70	Condition	71
Style	54	Colours	38
Lighting	49	Style	34
Colours	45	Lighting	32
Tactile	17	Dislike	16
Aesthetic	11	Aesthetic	15
		Emotion	10
Reps.Real life view	8		
Emotion	6	Photo. Quality	6
Dislike	6	Other	6
Activity/Motion	6	Activity/Motion	5
Function	5	Tactile	5
Photo. Quality	4	Function	3
Other	2	Reps.Real life view	1
Audio	1	Audio	1

Table 4.2.3.1 Ranked order of preference explanation categories for Stimulus Three: Rotherham Bus Station

The 'condition' category frequency scores are very similar for Rotherham (70) and Slough (71) residents. Much of this similarity may be attributed to the 'clean' preference explanation, which accounts for 38 frequency counts in the Rotherham and Slough results. Other 'condition ' category preference explanations with high Rotherham and Slough frequency counts are 'not derelict' and 'tidy'.

The preference explanations 'lumps/blocks of concrete' and 'modern' account for most of the Rotherham and Slough 'style' category frequencies. Many of the 'colour' category preference explanations in the Rotherham results refer to the 'light, bright colour of the building material' used for the bus station. This explanation has a lower frequency score in the Slough results.

Significant differences in frequency totals occur in four explanation categories, 'style', 'lighting', 'tactile' and 'dislike'. Examination of Table 4.2.3.2 reveals the main frequency variations occur in the preference explanations 'airy/open/space' (style), 'lighter/brighter' (lighting) 'cold' (tactile) and 'dislike' (dislike category).

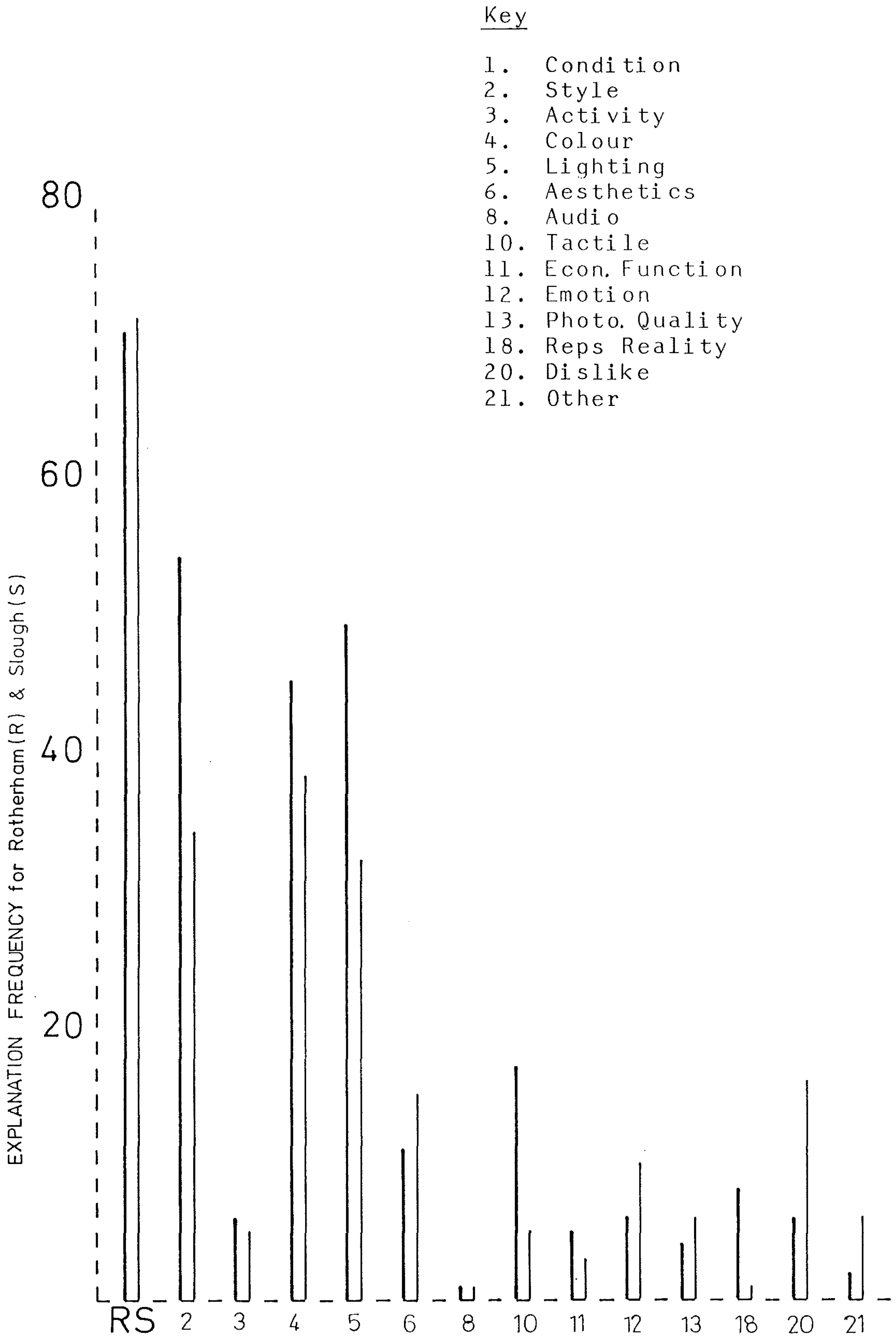


Fig.4.2.3 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Three: Rotherham Bus Station

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY Rotherham	Slough
Condition	cleaner/clean/clean looking	38	38
	tidy	10	19
	not derelict	16	11
	finished	5	1
	respectable/decent/presentable	1	2
Style	airy/open/space	12	4
	closed in/buildings packed together	3	6
	modern/modern architecture	17	11
	new	4	4
	concrete/lumps/blocks/slabs	18	9
Activity	alive/life	4	4
	movement	2	1
Colour	colours	9	14
	colourful material/colour lighter/brighter	26	15
	flowers brighten it up	10	9
Lighting	light/bright	49	32
Aesthetic	nice	9	12
	unpleasant	2	3
Audio	noisy/probably noisy	1	1
Tactile	cold	11	3
	draughty	5	1
	damp	1	1
Econ.Function	interesting	3	1
	like	3	9
Photo.Quality	close distance	2	5
	clear	2	1
Representative of Reality	Probably not as nice/not nice in reality	8	1
Dislike	Dislike	6	16
Other	Not like a bus station	2	6

Table 3.4.3.2 Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus three: Rotherham Bus Station

4.2.4 Rotherham And Slough Residents' (Identical) Preference Explanations In Response to Stimulus Four: Rotherham Civic Offices and Public Library

The histogram in figure 4.2.4, displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to Stimulus 4, Rotherham Civic Offices and Public Library. Table 4.2.4.2 shows the categorised preference explanation frequencies for Stimulus 4.

The 'visual style' category has the largest frequency total for both Rotherham and Slough residents group, see Table 4.2.4.1. The preference explanation total frequency scores are not dissimilar for Rotherham (147) and Slough (139) residents but significant variation occurs in the frequency counts for the 'style' category preference explanations: 'lawn complements the buildings', 'attractive building shapes', 'concrete', 'new' and 'like the modern style/like modern architecture'. The higher Slough frequency scores for the explanations 'attractive building shapes', 'like modern architecture' and 'new' suggest that Slough residents exhibit a greater sense of awareness of architecture and building aesthetics than Rotherham residents. On the other hand, the high Rotherham frequencies and low Slough frequencies for the preference explanation 'lawn complements the buildings', imply that Rotherham residents have a greater sense of awareness, or appreciation of this landscape feature. In addition, Rotherham residents appear to demonstrate a greater awareness of the use of concrete as a building material; as the preference explanation frequency scores referring to 'concrete' in preference assessments of photographs 3 and 4, are larger for Rotherham residents that Slough residents.

ROTHERHAM		SLOUGH	
Category	Frequency	Category	Frequency
Style	147	Style	139
Colour	81	Condition	60
Condition	61	Colour	51
Aesthetic	23	Aesthetic	35
Photo. Quality	11	Lighting	12
Lighting	6	Emotion	5
Activity/Motion	5	Photo. Quality	5
Audio	2	Activity/Motion	4
Comparisons	2	Function	3
Other	2	Audio	2
Function	1	Comparisons	2
Emotion	1	Other	2
Weather	1	Weather	1

Table 4.2.4.1 Ranked order of preference explanation categories for stimulus four: Rotherham civic offices and public library

The 'colour' 'condition' and 'aesthetic' categories have the second, third and fourth largest preference explanation frequencies, although the exact rank order of the categories varies. In the 'colour' category most preference explanations refer to 'grass/lawn/green/greenery', but the proportion represented by this explanation varies considerably in the Rotherham (82%) and Slough (53%)

'colour' categories. In the 'condition' category, the preference explanations 'tidy/neat' and 'clean' account for most of the Rotherham and Slough frequencies.

In addition to preference explanations frequency variations for the 'style' and 'colour' categories described above, Table 4.2.4.2 reveals that the preference explanation 'picturesque/ attractive' accounts for most of the frequency variation in the 'aesthetic' category.

Key

1. Condition
2. Style
3. Activity
4. Colour
5. Lighting
6. Aesthetics
8. Audio
11. Econ. Function
12. Emotion
13. Photo. Quality
14. Weather
19. Comparisons
21. Other

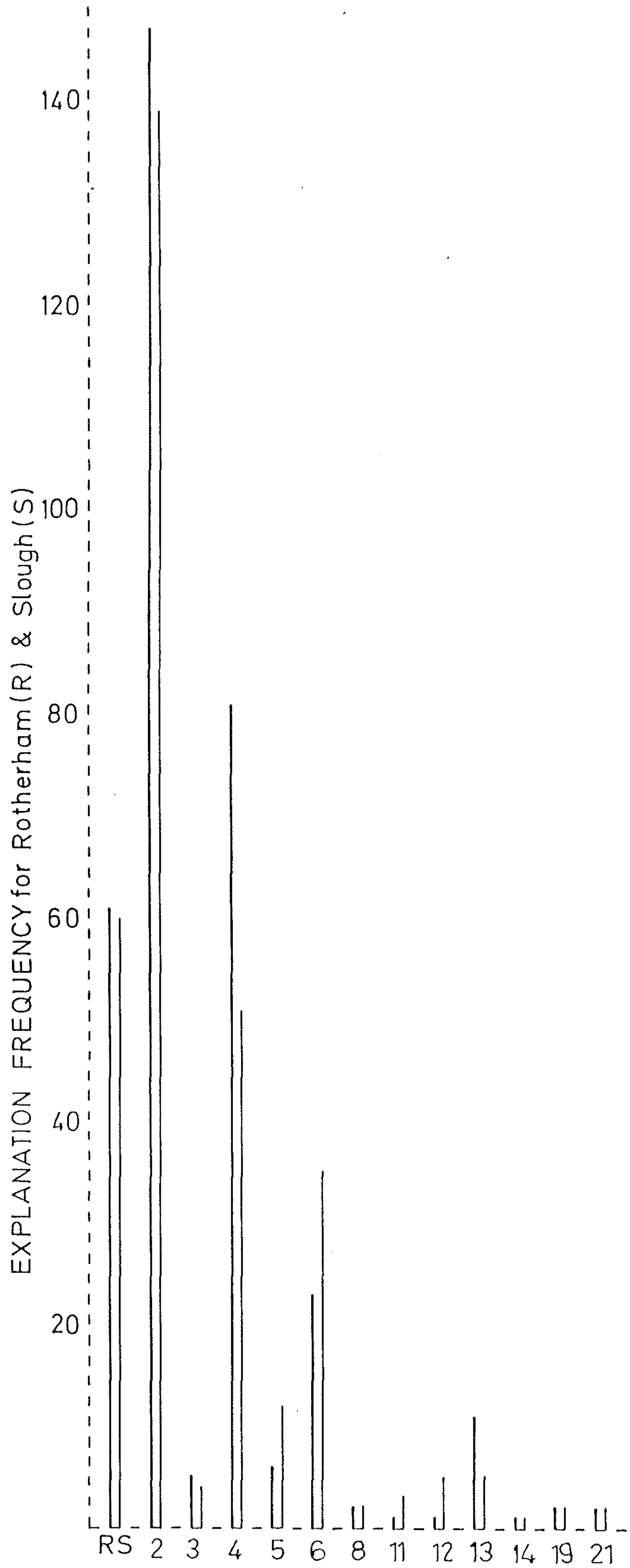


Fig.4.2.4 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Four: R/ham Civic Offices & Library

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY Rotherham	Slough
Condition	well kept(including lawn)	11	5
	tidy/neat	25	29
	clean	20	20
	developed/finished	4	5
	not derelict	1	1
Style	attractive building shapes	3	18
	new	7	17
	like modern/modern	19	24
	organised layout/well set out	2	5
	less cluttered	2	1
	less built-up/buildings not congested/spacious	9	7
	open	37	19
	building style blend together	1	4
	like architectural design of building	6	11
	dislike architectural design of building	3	4
	concrete	24	10
	buildings bright	1	1
	lawn improves/compliments building	21	3
	high/tall buildings	2	3
	dislike modern	7	6
	less character	2	4
	makes a pleasant skyline	1	2
Activity	something happening	2	2
	lifeless	3	2
Colours	grass/green/greenery/lawn	67	35
	colours/colourful	14	16
Lighting	light/bright/not dull	6	12
Aesthetic	picturesque view	8	8
	nice/pleasant/attractive	15	27
Audio	quiet	1	1
	road noisy	1	1
Econ.Function	work to be had	1	3
Emotion	more interesting	1	5
Photo. Quality	distance shot - preferable	6	4
	better picture content	5	1
Weather	sky dull	1	1
Comparisons	look like factories	1	1
	like a prison	1	1

Table 4.2.4.2 (Part One)

Other	dislike too many cars in a photo	2	2

Table 4.2.4.2 (Part Two) Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus four: Rotherham Civic Offices and Library

4.2.5 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Five: Slough High Street

The histogram in figure 4.2.5 displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to stimulus 5, Slough High Street. Table 4.2.5.2 displays the categorised preference explanation frequencies for stimulus 5.

A greater number of similarities rather than differences exist in the rank order of Rotherham and Slough preference explanation categories (see Table 4.2.5.1). The 'activity/ motion' 'economic function' and 'style' categories have the first second and third largest frequency scores.

The preference explanation 'more going on' (activity category) has similar frequency counts in the Rotherham (22) and Slough (24) results. The 'function' refer to to 'shops' and in the 'style' category, the preference explanation 'open' accounts for most of the Rotherham and Slough frequencies. Very similar frequency totals also occur for the 'lighting' 'condition', 'colour' and 'photograph quality' categories in the Rotherham and Slough results.

ROTHERHAM Category	Frequency	SLOUGH Category	Frequency
Activity/Motion	60	Activity/Motion	52
Function	50	Function	40
Style	30	Style	33
Lighting	25	Other	18
Emotion	21	Condition	18
Photo. Quality	20	Lighting	17
Condition	19	Emotion	14
Colour	10	Photo. Quality	13
		Colour	12
Other	7		
Aesthetic	5	Aesthetic	9
Dislike	1	Dislike	6

Table 4.2.5.1 Ranked order of preference explanation categories for stimulus five: Slough High Street

The main frequency variations occur in the preference explanations 'people/life' (activity/motion category) and 'more light/brighter' (lighting category) see Table 4.2.5.2.

Key

1. Condition
2. Style
3. Activity
4. Colour
5. Lighting
6. Aesthetics
11. Econ. Function
12. Emotion
13. Photo. Quality
20. Dislike
21. Other

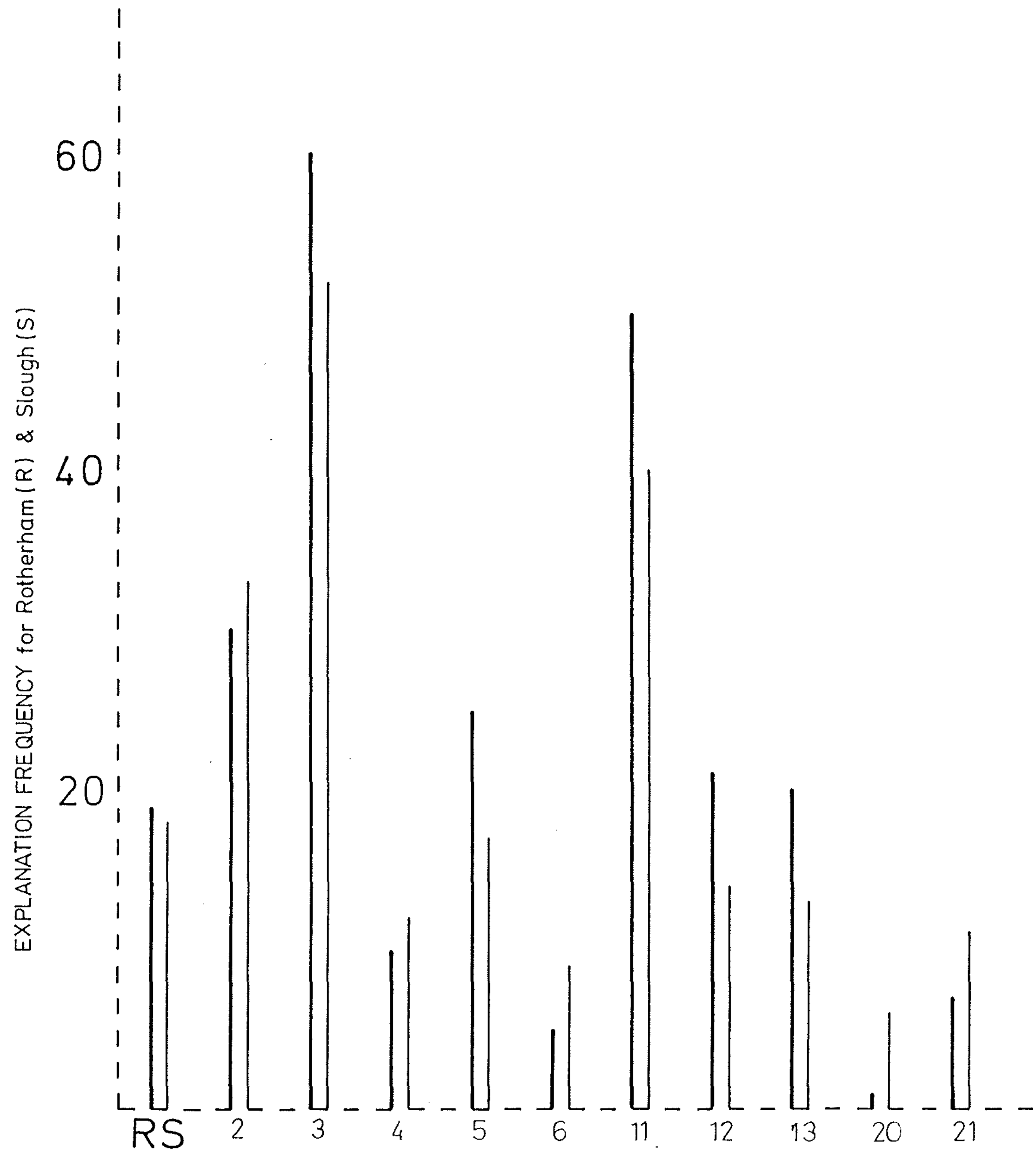


Fig.4.2.5 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Five: Slough High Street

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY	
		Rotherham	Slough
Condition	tidy	2	6
	clean	7	8
	affluent	1	1
	not derelict	3	1
	completed	6	2
Style	more space	8	1
	open	18	13
	modern	14	6
	like building architecture	1	2
	buildings crowd-in on you	4	6
	dislike architecture	1	3
	concrete	3	1
	sky blocked out	1	1
Activity	people/life	30	15
	more going on	22	24
	busy	8	13
Colours	colours/more variety/colourful	10	12
Lighting	lighter/brighter	23	13
	lights in shops	2	4
Aesthetic	nice/attractive/lovely	5	9
Econ. Function	shops	50	40
Emotion	more interesting	8	8
	shops interesting	7	2
	cheerful/happy	5	2
	warm/friendly	1	2
Photo. Quality	more objects	4	7
	distance see further	13	5
	clearer	3	1
Dislike	dislike	1	6
Other	prefer streets to precincts	1	3
	more to do	1	1
	like	4	12
	no hoardings	1	2

Table 4.2.5.2 Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus five: Slough High Street

4.2.6 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Six: Queensmere Shopping Centre, Slough

The histogram in figure 4.2.6 displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to stimulus 6, Queensmere Shopping Centre, Slough. Table 4.2.6.2 shows the categorised preference explanation frequencies for stimulus 6.

Two explanation categories, 'style' and 'dislike' differ considerably in frequency totals for Rotherham and Slough residents, see figure 4.2.6. An examination of Table 4.2.6.2 reveals that the greatest frequency variations occur in the style category 'enclosed/closed-in/shut-in/insufficient space/claustrophobic' and 'concrete-too much/slabs/blocks' preference explanations. The smaller frequency variations which occur in the 'function', 'colour' 'lighting' and 'aesthetic' categories are for the most part produced by frequency differences in the 'shops' (function) 'dull/dark' (lighting) and 'unattractive' (aesthetic) preference explanations.

In the identical preference explanation analysis descriptions for stimuli 3 and 4, Rotherham residents demonstrated a greater awareness of concrete, the principal building material used in the views displayed. The trend continues with respect to stimulus 6 results; preference explanations which refer to 'concrete' have higher frequency counts among the Rotherham residents rather than Slough residents. The results also suggest that Rotherham residents are more aware of the lack of space in photograph of the Queensmere Shopping Centre; it is likely that Slough respondent's first hand experience of the scene explains why they do not consider it to be as claustrophobic as the photograph might lead a stranger to believe. In the identical preference explanation analysis for stimulus 4 (4.2.4) Slough residents exhibited a greater awareness, or sense of building aesthetics. This tendency is again observed. More Slough respondents (11) than Rotherham respondents (1) considered the view of Queensmere Shopping Centre to be 'unattractive', see Table 4.2.6.2.

ROTHERHAM		SLOUGH	
Category	Frequency	Category	Frequency
Style	95	Style.	58
Lighting	60	Dislike	56
Condition	33	Lighting	50
Colour	20	Colour	31
Dislike	20	Condition	31
Function	15	Function	28
Emotion	15	Emotion	19
Activity/Motion	13	Aesthetic	11
Comparisons	7	Activity/Motion	7
Photo. Quality	5	Comparisons	7
Recommendations	2	Reps.Real life view	6
Other	2	Photo. Quality	5
Reps.Real life view	1	Other	2
Aesthetic	1	Recommendations	1

Table 4.2.6.1 Ranked order of preference explanation categories for stimulus six: Queensmere Shopping Centre, Slough

The 'style' category (see Table 4.2.6.1) displays the largest frequency total for both Rotherham and Slough residents. Categories 'lighting', 'condition', 'colour' and 'dislike' make up the second, third, fourth and fifth largest preference categories but vary in rank order in the Rotherham and Slough results. In the 'lighting' category, the preference explanation 'dull/dark/ dingy/little sky' accounts for most of the Rotherham (59) and Slough (49) frequencies. The frequency counts of the Rotherham and Slough preference explanations which make up the condition, colour and emotion categories are also similar.

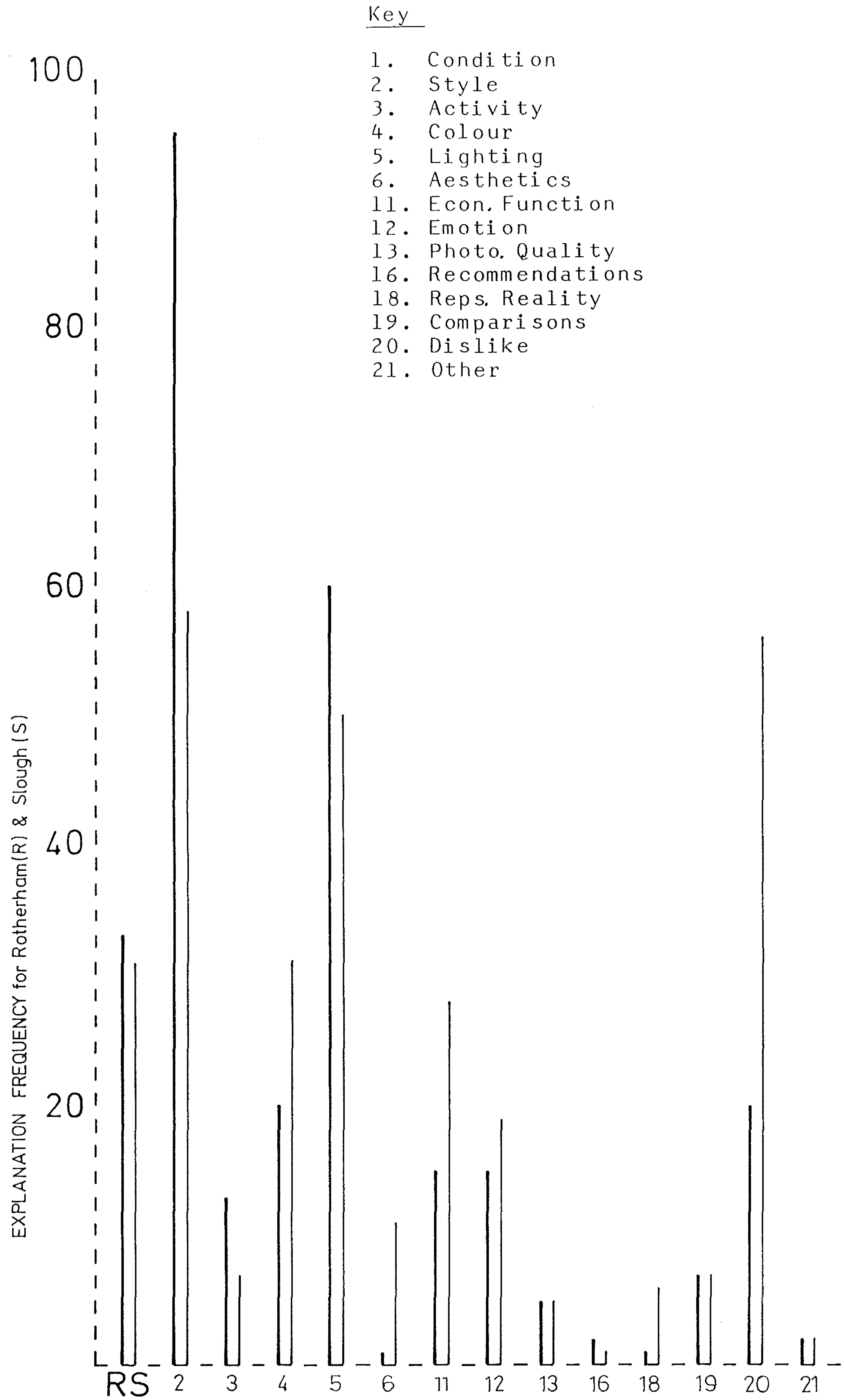


Fig.4.2.6 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Six: Queensmere Shopping Centre Slough

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY Rotherham	Slough
Condition	clean	3	4
	finished/completed	5	2
	not derelict/not run down	11	5
	tidy	4	5
	new	4	3
	dirty	6	12
Style	buildings on top of you/ very built-up/buildings crowded/too close together	11	9
	dull stone	4	10
	enclosed/shut-in/closed in/ claustrophobic	41	16
	building shape out of pro- portion	1	2
	concrete/too much/slabs/ blocks	17	7
	compact	1	1
	modern	1	5
	less sky	1	2
	dead-end	6	2
	architecture interesting	2	5
Activity	livelier	1	1
	no people/empty	10	4
	nothing happening	2	2
Colour	greys	1	4
	dark colours	13	7
	drab	6	10
Lighting	dull/dark/dingy/little sky	59	49
	probably nice when lit up	1	1
Aesthetics	unattractive/unpleasant	1	11
Econ.Function	shops	15	28
Emotion	depressing/miserable/gloomy	12	16
	unwelcoming	1	2
	get lost there	2	1
Photo. Quality	restricted/blocked view	2	3
	close distance shot	3	2
Recommendation	should be made brighter	2	1
Representative of Reality	photo does injustice to scene	1	6

Table 4.2.6.2 (Part One)

Comparison	like a dungeon/jail	2	2
	like a tunnel	3	2
	like a subway/underpass entrance	2	3
Dislike	dislike	20	56
Other	no factories	1	1
	like lampposts	1	1

Table 4.2.6.2 (Part Two) Frequencies 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus six: Queensmere Shopping Centre, Slough

4.2.7 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Seven: Derelict Houses on Fitzwilliam Road, Rotherham

The histogram in figure 2.4.7 displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to stimulus 7, other derelict houses on Fitzwilliam Road, Rotherham. Table 4.2.7.2 shows the categorised preference explanation frequencies for stimulus 7.

Three explanation categories have considerably different frequency totals for Rotherham and Slough residents, see figure 4.2.7. These categories are 'dislike', 'style' and 'condition'. An examination of Table 4.2.7.2 reveals that most of the frequency variations occur in the preference explanations 'dislike' in the 'dislike' category; 'more character' and 'traditional/not modern' in the 'style' category; and 'derelict/dilapidated', 'have potential' and 'no-windows/bricked-up' in the 'condition' category.

Preference explanation frequency differences in the Rotherham and Slough residents 'recommendations' categories are not apparent in the histogram (figure 4.2.7) but discernable in Table 4.2.7.2. Variations occur in the Rotherham and Slough frequencies for the preference explanations 'should be restored' and 'should be knocked down'.

These results suggest that Slough residents' exhibit a preference for the houses traditional building style depicted in photograph 7, despite their state of utter dereliction; on the whole they are in favour of restoring and preserving the houses which are considered to have some future potential. Rotherham residents' appear to be less aware of the houses style of building, they consider the houses have no future potential and would prefer to see the houses demolished.

In the preference explanations analyses of photographs 3, 5 and 6, Slough residents more forcefully express 'dislike' for the photographs, than the Rotherham residents. The trend continues with respect to the results for stimulus 7; the Slough frequency score for the 'dislike' explanation category is considerably higher (42) than the corresponding Rotherham score (18).

ROTHERHAM Category	Frequency	SLOUGH Category	Frequency
Condition	165	Condition	148
Recommendations	27	Dislike	42
Emotion	25	Style	32
Dislike	18	Emotion	30
Function	10	Recommendations	25
Style	9	Function	9
Content Description	5	Aesthetic	9
Activity/Motion	4	Activity/Motion	6
Aesthetic	2	Colour	4
Photo. Quality	1	Content Description	3
Colour	1	Photo. Quality	2

Table 4.2.7.1 Ranked order of preference explanation categories for stimulus seven: The derelict houses on Fitzwilliam Road, Rotherham

In spite of the frequency variations described above a great many similarities may be observed in the Rotherham and Slough preference explanations. In the rank order of preference explanation categories (see Table 4.2.7.1) the 'condition' category displays the largest frequency totals in the Rotherham and Slough results and the 'dislike', 'emotion' and 'recommendations' categories are located within the top five preference explanation categories. In the 'condition' category, the preference explanation 'derelict/dilapidated' accounts for most of the frequency count in the Rotherham and Slough results. 'Neglected/ rundown' and 'old' preference explanations also have sizeable Rotherham and Slough frequency scores.

Finally, similar frequencies occur for the preference explanations that make up the 'emotion' categories; explanations 'depressing' and 'sad/pity/shame' have the highest frequencies within the 'emotion' categories.

Key

1. Condition
2. Style
3. Activity
4. Colour
6. Aesthetics
7. Content Description
11. Econ. Function
12. Emotion
13. Photo. Quality
16. Recommendations
20. Dislike

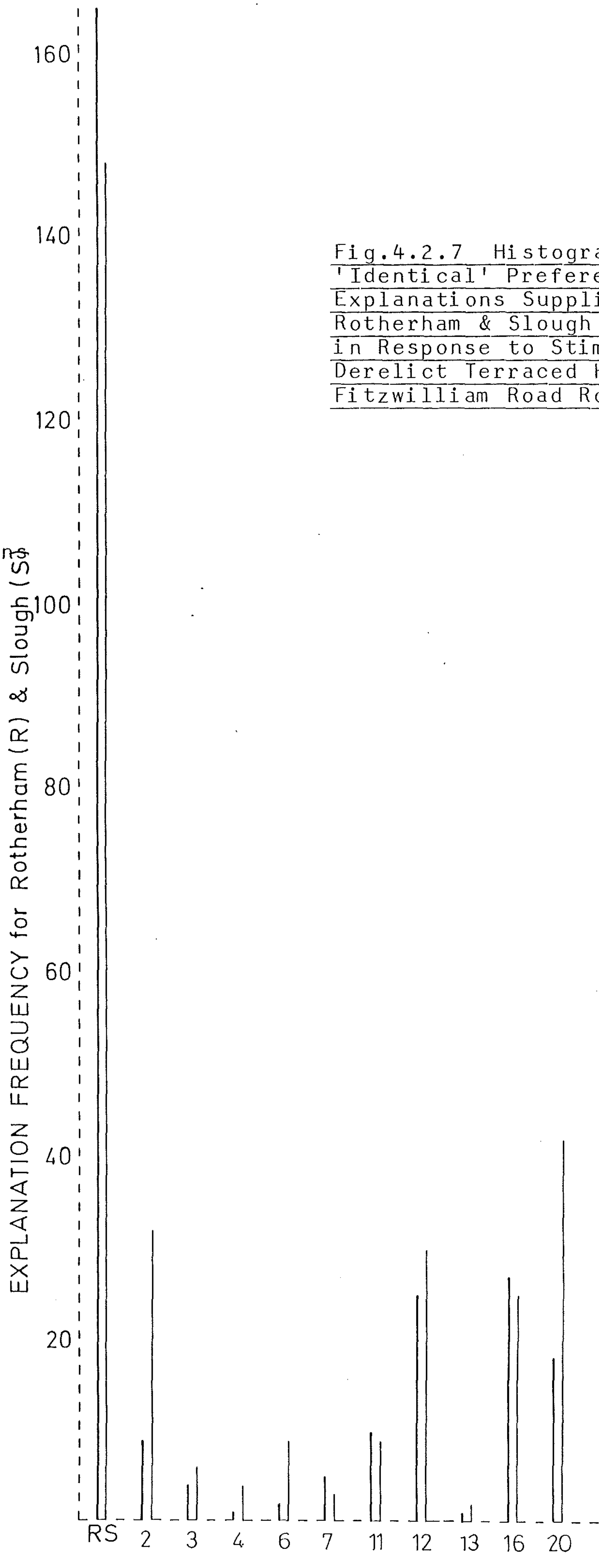


Fig.4.2.7 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Seven: Derelict Terraced Houses Fitzwilliam Road Rotherham

CATEGORY	CATERGORY EXPLANATION	FREQUENCY Rotherham	Slough
Condition	old fashioned	2	4
	neglected/run-down	20	12
	derelict/dilapidated/ decrepit	69	85
	scruffy/untidy	4	6
	dirty	1	5
	no windows/windows gape/ windows bricked-up	16	5
	eyesore	4	3
	dump/mess	9	3
	have no potential	11	5
	have potential	9	20
	old	18	17
	tidy	2	3
Style	more character	1	11
	style interesting	1	1
	traditional/not modern/ old-fashioned preferable style	7	20
Colour	drab	1	4
Aesthetic	desolate/no people	4	6
Colour Description	slums	5	3
Econ. Function	not lived in/houses empty/waste	10	9
Emotion	depressing	10	10
	sad/pity/shame	9	14
	more interesting	2	1
	like old family house	1	1
	could imagine it's past	1	3
	morbid	2	1
Photo. Quality	dislike view-too straight/ a line/row across the photo	1	2
Recommendation	should be restored	6	18
	should be knocked down	19	6
	could do something with it	2	1
Dislike	dislike	18	42

Table 4.2.7.2 Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus seven: derelict terraced houses, Fitzwilliam Road, Rotherham

4.2.8 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Eight: Derelict Shops And Houses, Crown Corner Slough

The histogram in figure 4.2.8 displays the explanation categories total frequencies for identical respondents with respect to stimulus 8, the derelict shops and houses at Crown Corner, Slough. Table 4.2.8.2 shows the categorised preference explanation frequencies for stimulus 8.

The 'visual condition' category has, by far, the largest frequency total for both Rotherham and Slough residents groups, see Table 4.2.8.1. In this category, the preference explanations 'derelict/dilapidated', 'tatty/scruffy/overgrown/untidy' and 'neglected/poorly kept' account for most of the Rotherham and Slough frequencies (see Table 4.2.8.2).

The 'visual style' preference explanation category, is the second largest frequency category in the Rotherham results but the third largest in the Slough results. In the former, most of the frequencies refer to the 'old' preference explanation but in the Slough results, the frequencies are more evenly spread across the different preference explanations that represent that category.

ROTHERHAM Category	Frequency	SLOUGH Category	Frequency
Condition	102	Condition	123
Style	19	Dislike	44
Recommendations	11	Style	28
		Aesthetic	15
Content Description	7		
Colour	5	Recommendations	8
Lighting	4	Other	7
Other	4	Content Description	6
Dislike	3	Lighting	4
Aesthetic	2	Colour	4
Emotion	2	Emotion	3
Activity/motion	1	Activity	2
Function	1	Function	1

Table 4.2.8.1 Ranked order of preference explanation categories for stimulus eight: derelict shops and houses, Crown Corner, Slough

It is possible that the high Slough frequency counts for the 'dislike', 'condition' and 'aesthetic' categories reflect a strong local bias against stimulus 8.

Two of the explanation categories 'dislike' and 'visual condition', have very different frequency totals for Rotherham and Slough residents, see figure 4.2.8. An examination of Table 4.2.8.2 reveals that most of the frequency variations occur in the preference explanations 'dislike' in the 'dislike' category and 'neg lected/poorly kept', 'tatty/scruffy/overgrown/untidy' and 'eyesore' in the 'condition' category.

Smaller differences exist in the Rotherham and Slough frequency results for the 'aesthetic' and 'style' categories. In the 'aesthetic' category most of the frequency variation is accounted for by the preference explanation 'unpleasant'. In the 'style' category the various preference explanations have similar frequency scores for the Rotherham and Slough results.

In the preference explanation results for photographs 3, 5, 6 and 7 Slough residents more forcefully express 'dislike' for these views than the Rotherham residents. The trend continues with respect to the results for stimulus 8, the Slough frequency score for the 'dislike' explanation category is considerably higher (44) than the Rotherham frequency score (3). The higher Slough frequency count in the 'aesthetic' category follows the trend of the preceding stimuli results, where Slough residents exhibit a greater aesthetic awareness than Rotherham residents, see sections 4.2.3, 4.2.4, and 4.2.5.

Key

1. Condition
2. Style
3. Activity
4. Colour
5. Lighting
6. Aesthetic
7. Content Description
11. Econ. Function
12. Emotion
16. Recommendations
20. Dislike
21. Other

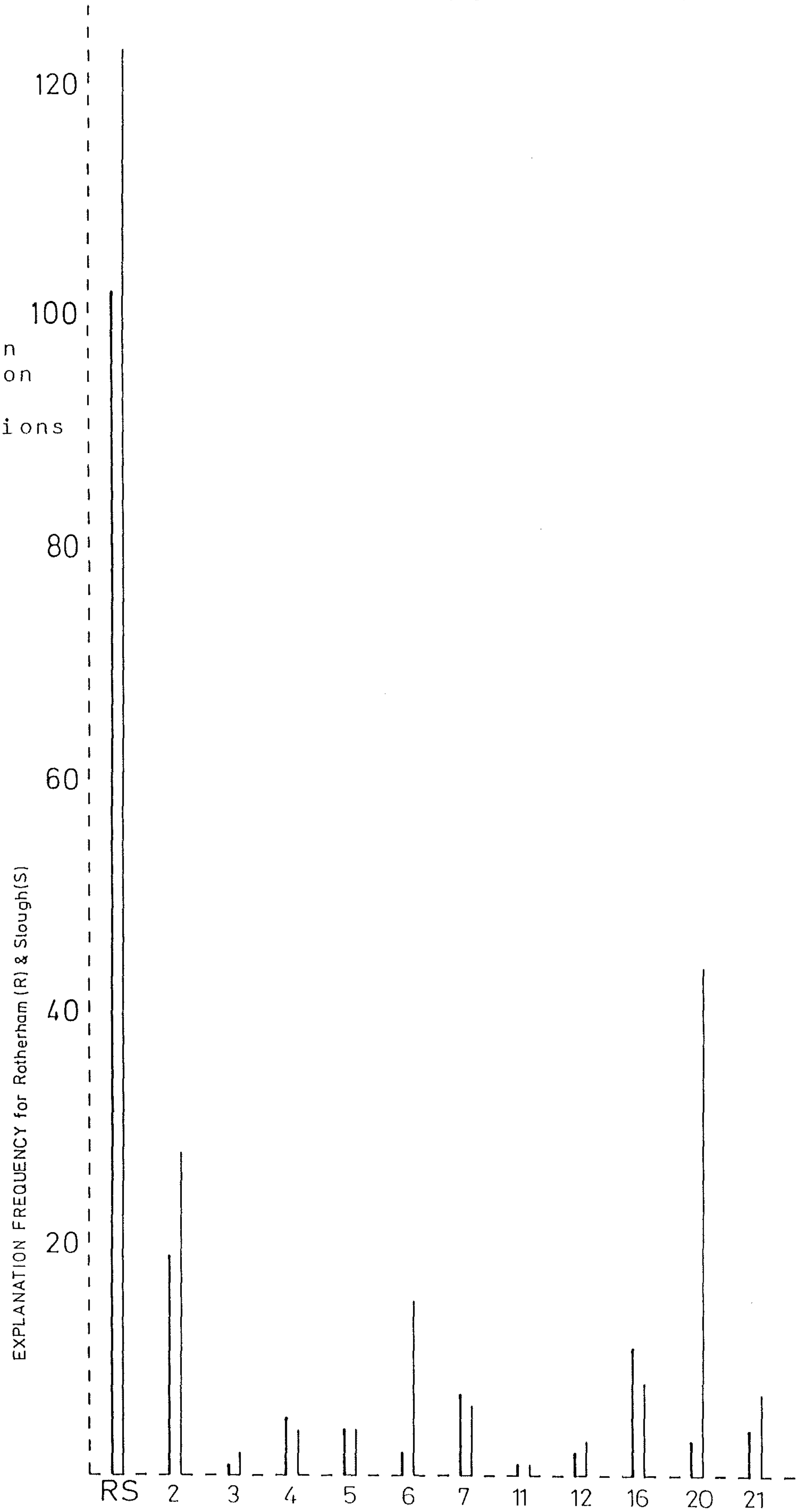


Fig.4.2.8 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Eight: Derelict Shops & Houses Crown Corner, Slough

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY Rotherham	Slough
Condition	neglected/run down/poorly kept/dirty	35	12
	tatty/scruffy/untidy/over-grown(incl.grass)/cluttered		
	derelict/dilapidated	32	30
	eyesore/mess/dump	4	21
	less potential	1	1
	incomplete/poorly developed	1	1
	decaying/decayed	1	1
Style	prefer old style of building to new	1	4
	more character	1	5
	historical	1	1
	old	12	9
	more space/open	2	7
	closed-in	1	1
	backs of houses always worst	1	1
Activity	more people	1	2
Colour	some green/greenery/grass	4	2
	drab	1	2
Lighting	dull/dark	4	4
Aesthetic	more picturesque	1	3
	unpleasant	1	12
Content Description	new buildings surround old	6	5
	slums	1	1
Econ. Function	waste	1	1
Emotion	sad	1	2
Recommendation	should be developed/improved	4	5
	should be grassed over/ tidied up	7	3
Dislike	dislike	3	44
Other	dislike hoardings	4	7

Table 4.2.8.2 Frequencies 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus eight: derelict shops and houses, Crown Corner, Slough

4.2.9 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Nine: Derelict Site On Frederick Street, Rotherham

The histogram in figure 4.2.9 displays the explanation categories' total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to stimulus 9, the derelict site on Frederick Street, Rotherham. Table 4.2.9.2 shows the categorised explanation frequencies for stimulus 9.

The frequency scores and ranked order of preference explanation categories are very similar for Rotherham and Slough respondents. The 'style' category has the largest frequency total for both respondent groups, see Table 4.2.9.1. Categories 'other reasons', 'condition', 'contents description' and 'activity/motion' are located in the top five rankings although their exact positions vary in the Rotherham and Slough results.

ROTHERHAM		SLOUGH	
Category	Frequency	Category	Frequency
Style	44	Style	53
Other	37	Condition	29
Condition	25	Other	20
Content Description	20	Activity/Motion	15
		Content Description	15
Activity/Motion	8		
Aesthetic	6	Aesthetic	9
Dislike	6	Dislike	9
Lighting	4	Emotion	6
Photo. Quality	4	Photo. Quality	5
Emotion	3	Lighting	5
Colour	3	Colour	3
Function	2	Function	2
Recommendations	2	Recommendations	1

Table 4.2.9.1 Ranked order of preference explanation categories for stimulus nine: the boarded site on Frederick Street, Rotherham

The most significant frequency variation occurs in the 'other reasons' category, see figure 4.2.9. An examination of Table 4.2.9.2 reveals that for the most part, this variation is due to Rotherham (26) and Slough (15) frequency differences for the preference explanation 'dislike hoardings'.

Variations in the Rotherham and Slough preference explanation frequencies for the 'condition' category, not apparent in figure 4.2.9, are discernable in Table 4.2.9.2. Frequency variations occur in the preference explanations 'unfinished/incomplete/half finished' and 'untidy/cluttered'. The higher Rotherham frequency score for the preference explanation 'unfinished' is probably attributable to Rotherham residents' knowledge of the local scene.

Key

1. Condition
2. Style
3. Activity
4. Colour
5. Lighting
6. Aesthetics
7. Content Description
11. Econ. Function
12. Emotion
13. Photo. Quality
16. Recommendations
20. Dislike
21. Other

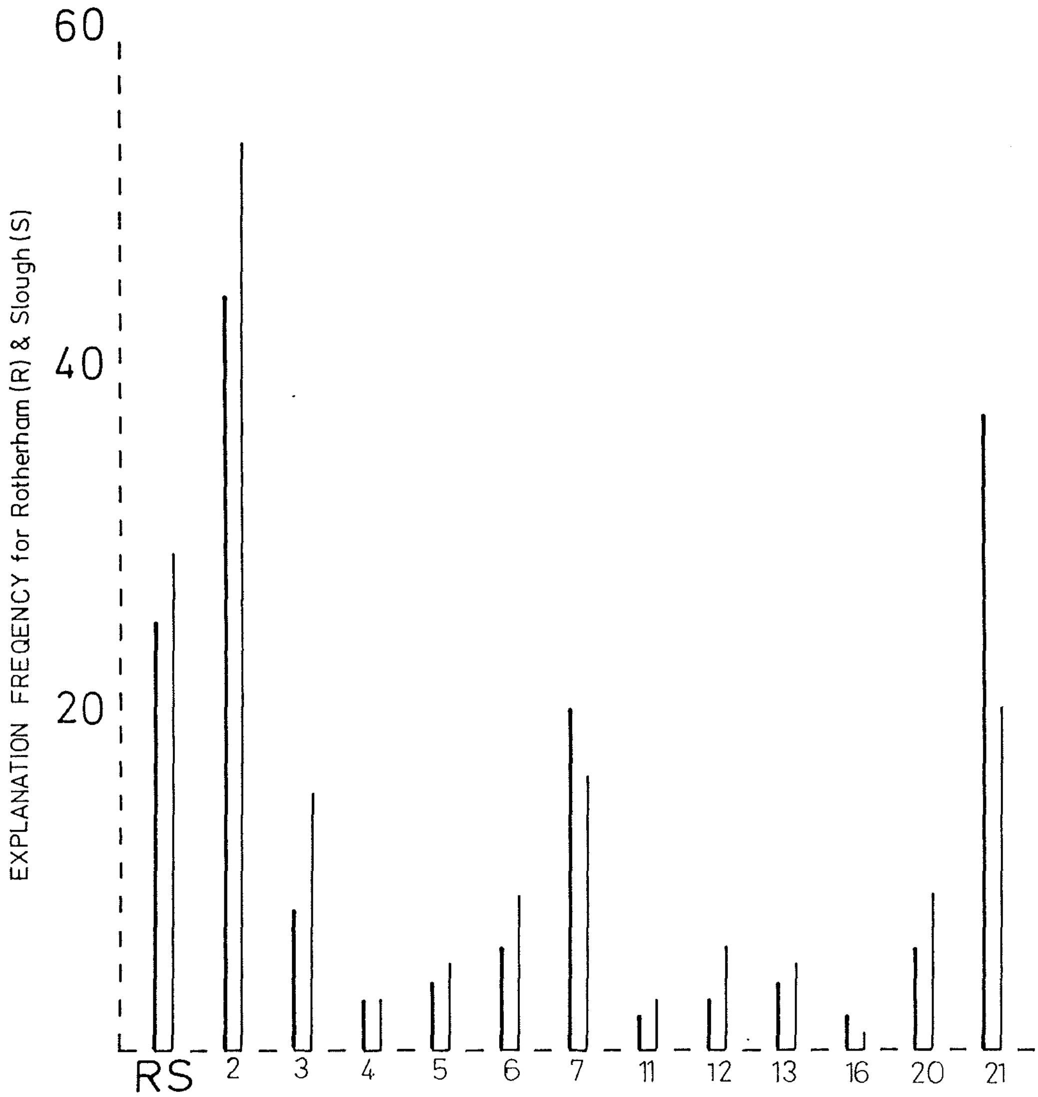


Fig.4.2.9 Histogram of 'Identical' Preference Explanations Supplied by Rotherham & Slough Respondents in Response to Stimulus Nine: Boarded Site, Frederick Street Rotherham

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY	
		Rotherham	Slough
Condition	less derelict/run-down	7	2
	tidier/neater	6	8
	untidy/cluttered	3	13
	cleaner	8	5
	lived in look	1	1
	unfinished/incomplete/ half finished	19	5
	has greater potential/ future prospects	6	3
	paving neat	1	3
	mess/eyesore	8	3
Style	some old buildings with character	3	4
	buildings have greater variety	1	3
	buildings quaint	1	1
	old buildings	8	8
	more space/open/not closed in	12	14
	built up/buildings crowd-in/too congested	5	14
	not concrete/less concrete/ bricks	4	3
	pot plants improve view	10	6
Activity	busy/more interesting	2	8
	people	3	4
	space/empty	3	3
Colour	colourful/more colour	3	3
Lighting	brighter	4	5
Aesthetic	attractive/nice	3	7
	unattractive/unpleasant	3	2
Content Description	pot plants	5	9
	fenced off/barricaded	1	2
	boarded-up	13	3
	backs of houses un-pleasant	1	1
Econ. Function	wasteland/waste of space	2	2
Emotion	depressing	1	2
	more interesting	2	4
Photo. Quality	see further/distance shot	4	5
Recommendation	something could be done to improve area	2	1

Table 4.2.9.2 (Part One)

Dislike	dislike	6	9
Other	dislike hoardings	26	15
	dislike fencing	2	1
	no factories	3	2
	high hopes for it s development	6	2

Table 4.2.9.2 (Part Two) Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to stimulus nine: boarded site Frederick Street, Rotherham

4.2.10 Rotherham And Slough Residents' (Identical) Preference Explanations In Response To Stimulus Ten: Derelict Industrial Site, Parkgate, Rotherham

The histogram in figure 4.2.10 displays the explanation categories total frequencies for identical explanations supplied by Rotherham and Slough respondents with respect to stimulus 10, the derelict industrial site at Parkgate, Rotherham. Table 4.2.10.2 shows the categorised explanation frequencies for stimulus 10.

The 'content description' category has, by far, the largest frequency total for both Rotherham and Slough residents groups, see Table 4.2.10.1. The preference explanation 'tip/dump/rubbish/mess' account for the majority of the Rotherham and Slough frequencies.

The 'condition' and 'emotion' categories are located among the top four preference explanation rankings, although their exact positions vary in the Rotherham and Slough results.

ROTHERHAM Category	Frequency	SLOUGH Category	Frequency
Content Description	105	Content Description	87
Condition	31	Dislike	50
Emotion	17	Condition	44
Comparisons	15	Emotion	20
Other	9	Activity/Motion	8
Activity/motion	5	Function	6
Dislike	4	Comparisons	4
Recommendations	3	Aesthetic	3
Function	2	Other	1
Aesthetics	1	Lighting	1
Lighting	1	Recommendations	1

Table 4.2.10.1 Ranked order of preference explanation categories for stimulus ten: derelict industrial site, Parkgate, Rotherham

The most significant preference explanation frequency variations occur in the 'contents description' and 'dislike' categories. The preference explanation 'only rubble' accounts for most of the variation in the former category. Smaller frequency differences occur in the Rotherham and Slough results for the 'condition' and 'comparisons' categories. In the 'condition' category, the largest Rotherham frequency (10) relates to the preference explanation 'derelict' and the largest Slough frequencies relate to the preference explanations 'dirty' (10) and 'eyesore' (11). The most common comparison description used by Rotherham respondents in preference judgements involving stimulus 10 is 'like a scrap yard', but only one Slough respondent uses this analogy to explain his preference decision against selecting stimulus 10.

In the preceding preference explanations analyses, Slough residents appeared more forceful and definite than Rotherham respondents in expressing their dislike for photographs 3, 5, 6, 7 and 8. The trend continues with respect to the preference explanation results for stimulus 10; the Slough frequency count for the 'dislike' explanation category is considerably higher (50) than the Rotherham frequency (4).

Key

1. Condition
3. Activity
5. Lighting
6. Aesthetic
7. Content Description
11. Econ. Function
12. Emotion
16. Recommendations
19. Comparisons
20. Dislike
21. Other

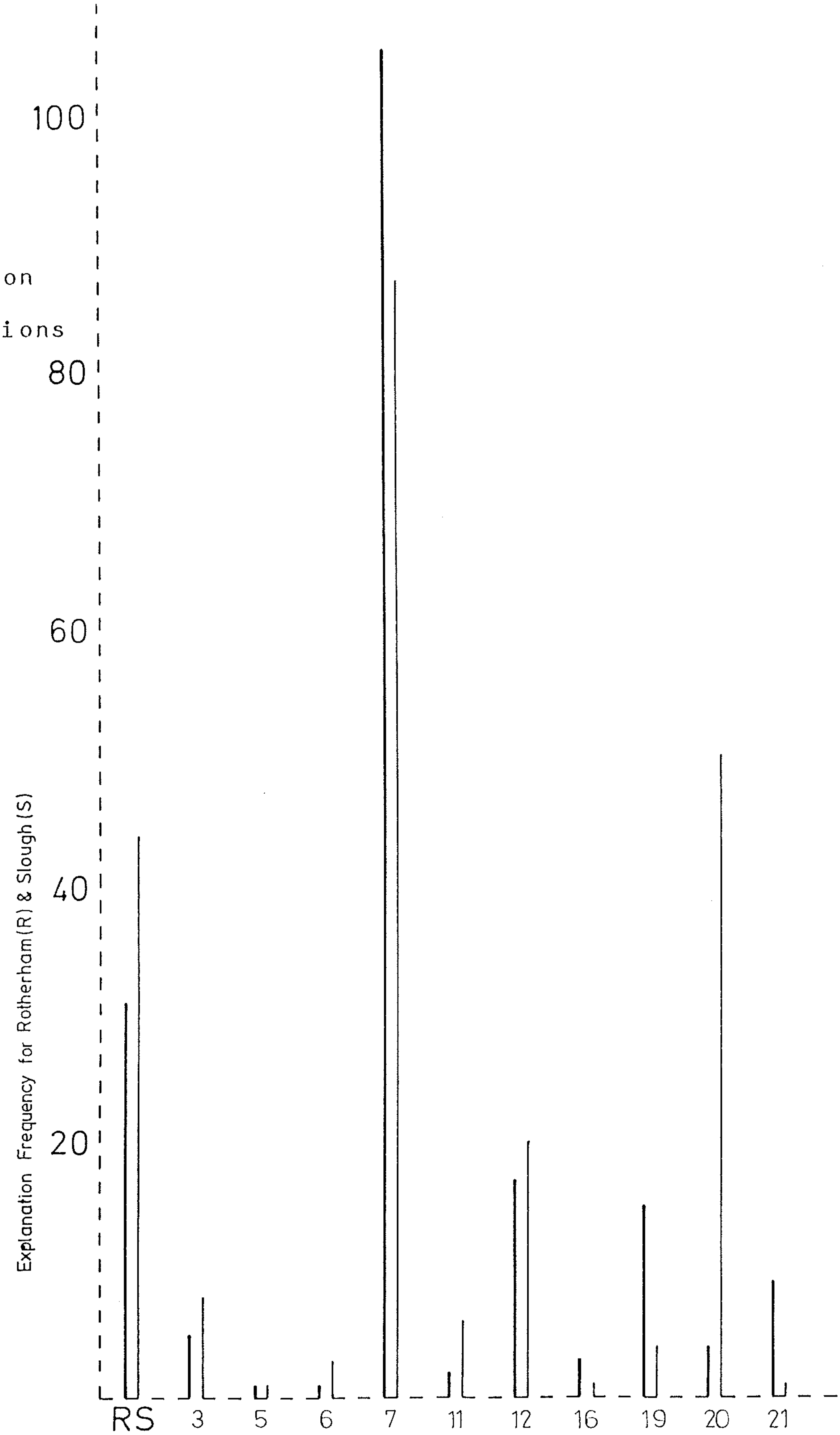


Fig.4.2.10 Histogram of 'Identical' Preference Explanations Supplied by Rotherham and Slough Respondents in Response to Stimulus Ten: Parkgate Derelict Industrial Estate, R/ham

CATEGORY	PREFERENCE EXPLANATION	FREQUENCY	
		Rotherham	Slough
Condition	derelict	10	2
	dirty	7	10
	untidy/jumbled	2	8
	eyesore	4	11
	not developed	1	1
	open	5	3
	has potential	2	9
Activity	something being done/ happening	4	6
	desolate	1	2
Lighting	dull/dismal	1	1
Aesthetic	ugly/unsightly	1	3
Content Description	nothing there	8	9
	only rubble	22	4
	building site	3	2
	demolition site/demolished	4	4
	tip/dump/rubbish/mess	68	68
Econ. Function	wasteland	2	6
Emotion	could muse about it/ imagine it	1	2
	interesting	5	8
	could explore it	2	4
	arouses curiosity/mysterious	2	1
	sad	2	2
	depressing	4	1
	interesting/exciting to see what becomes of it	1	2
Recommendation	could be landscaped/grassed over	3	1
Comparison	likea bombsite/landmine/ war site	5	3
	like a scrapyard	10	1
Dislike	dislike/hate	4	50
Other	shows progress	9	1

Table 4.2.10.2 Frequencies of 'identical' preference explanations supplied by Rotherham and Slough respondents in response to Stimulus Ten: Parkgate derelict industrial estate

4.2.11 Summary of Results

This section summarises the findings of the analyses of preference explanations supplied by both Rotherham and Slough respondents and described in sections 4.2.1 to 4.2.10.

When considering the responses to each individual photograph used in the preference test, a large degree of similarity may be observed between the Rotherham and Slough results. For most photographs, the preference explanation categories with the highest frequency counts relate to 'condition' or 'style' but explanations which refer to 'activity/motion' and 'contents description' have the highest frequency counts for two photographs (Slough High Street, view 5 and Parkgate, view 10, respectively. Other important considerations in preference selections included 'colour' 'lighting', 'dislike' and 'proposed recommendations'.

A large number of preference explanations which refer to different aspects of the 'condition', 'style', 'colour' 'lighting' and 'aesthetics' of the views displayed, are supplied by respondents in response to more than one photograph, see Table 4.2.11.1. For example the preference explanation 'tidy/neat', categorised as 'condition' is supplied by respondents as a preference explanation in six of the ten views displayed.

Pref. Explanations	PHOTOGRAPHS 1. Slough Trading Estate	2. Rotherham, Eastwood Trading Estate	3. Rotherham Bus Station	4. Rotherham, Civic Offices	5. High Street, Slough	6. Queensmere, Slough Shopping Centre	7. Derelict houses, Rotherham	8. Derelict shops and houses, Slough	9. Boarded-up disused site, Rotherham	10. Derelict Parkgate Industrial Estate, Rotherham
Condition										
clean	x	x	x	x	x	x				x
tidy/neat	x	x	x	x	x	x				
better kept	x			x						
poorly kept		x					x	x		
derelict							x	x		x
eyesore								x		x
old							x	x		
Style										
open	x	x	x	x	x				x	
modern			x	x	x	x				
concrete			x	x		x				
buildings on top of you						x			x	
Colour										
colour			x	x	x				x	
green/grass		x		x						
Lighting										
light/bright			x	x	x					
Aesthetic										
nice/pleasant attractive		x		x	x					
dislike						x	x	x		x

Table 4.2.11.1 Preference Explanations Reiterated for Different Stimuli

Some explanations are supplied considerably less often by the Rotherham or Slough sample. For instance, preference explanations which refer to 'the use of concrete' the 'lighting or brightness', of the views and landscape features such as 'lawn' are more frequently provided by Rotherham respondents than Slough respondents. The frequency with which Rotherham respondents supply preference explanations that refer to 'concrete', such as 'just concrete' 'too much concrete' or 'only slabs', or 'blocks of concrete' is double (59) the Slough respondents frequency total (26) for the photographs of the bus station, civic offices and the Queensmere shopping centre (stimuli 3,4, and 6). It would suggest that Rotherham respondents tend to be more aware of the use of concrete than Slough respondents but a Chi-squared test of significance (0.1) does not support this assumption see Table 4.2.11.2.

Table 4.2.11.2 Chi-squared test for random variation in preference explanation frequencies, 'attractive', 'concrete' and 'lighting'

Preference explanation	Chi-squared (X^2)	degrees of freedom	Significance level
attractive	7.495	5	Not signif. (0.1)
concrete	0.257	2	"
lighting	0.0146	1	"

More Rotherham respondents than Slough respondents use 'lighting' and 'brightness' to explain preferences for photographs depicting the bus station and Slough High Street (stimuli 3 and 5). Also preference explanations concerning the 'light' and 'bright colour' of the building material used for the bus station are more frequently supplied by Rotherham respondents. However explanations which refer to the 'dullness' and 'darkness' of the Queensmere shopping centre (stimulus 6) are similar in number for the Rotherham (59) and Slough (49) respondents. So although one might at first suppose that Rotherham residents are more perceptive of the 'light' and 'darkness' in the photographs, the response to stimulus 6 contradicts this supposition.

It is endorsed by the chi-squared test result which indicates that the frequency pattern observed is most likely produced by random variation in the data set (see table 4.2.11.2).

Differences in preference explanation frequencies occur in the Rotherham and Slough results for stimulus 4, Rotherham Civic Offices. More Rotherham than Slough residents consider that the lawn in front of the Rotherham Civic Offices 'enhances' and 'complements the buildings'. The number of times Rotherham respondents use explanations which refer to the 'lawn', 'grass', 'green' or 'greenery' in the photograph is almost double (67) the Slough respondents total (35) (see Table 4.2.4.1). Although this would imply that Rotherham respondents are more perceptive of landscape features, it is refuted by the response to the photographs which depict Eastwood trading estate and the bus station (stimuli 2 and 3): a similar number of Rotherham and Slough respondents use explanations which refer to the 'grass', 'fields' 'greenery' and 'flowers' for stimuli 2 and 3.

Preference explanations which refer to the 'modern' and 'traditional' building styles and the 'aesthetics' of the views displayed are more frequently supplied by Slough respondents than Rotherham respondents. This would suggest that Slough respondents are more aware and appreciative of 'modern' and 'traditional' building styles than Rotherham respondents. However Slough preferences for the 'modern' architectural style, with 'attractive building shapes' and the 'more traditional style' with 'more character' are restricted to the Rotherham townscape photographs; and in particular those depicting the civic offices, and the row of derelict Victorian terraced houses (stimuli 4 and 7). It would appear that Slough respondents do not favour the modern style of the new Slough buildings displayed in the Slough townscape photographs of the Queensmere shopping centre and High Street (stimuli 6 and 5), nor do they favour the traditional style of the derelict shops and houses at Crown Corner (stimulus 8). Slough respondent's preferences for such architectural styles are therefore strongly biased against local scenes but in favour of non-local ones.

This effect is not apparent in the Rotherham preference explanation frequencies relating to architectural style with one exception, a bias against local scenes is observed with respect to stimulus 7, the row of derelict terraced houses in Rotherham. A large number of Rotherham respondents who consider the houses have no future potential, recommend demolition, unlike the majority of Slough respondents who consider the houses have potential and recommend renovation (see Table 4.2.7.1).

Analysis of the preference explanation frequencies shows that Slough respondents demonstrate a greater tendency to base preference judgements on the 'aesthetic' nature of the photographs displayed. The frequency counts for the preference explanations categorised as 'aesthetic' which include 'nice', pleasant, attractive and picturesque are greater for Slough respondents than Rotherham respondents in six of the ten photograph results.

These photographs depict Slough trading estate, Eastwood trading estate, the bus station, the civic offices, Slough High Street, and the derelict site on Frederick Street, (stimuli 1, 2, 3, 4, 5 and 9). However a chi-squared test does not lend statistical significance to the result but indicates that it is most likely a product of random variation in the original frequency data.

Antonymous aesthetic preference explanations such as 'unattractive', 'unpleasant' and 'ugly' also have higher frequency counts for the Slough respondents for stimuli 6, 7, 8 and 10; photographs depicting Queensmere shopping centre; the row of derelict Victorian houses, the derelict shops and houses at Crown Corner and the derelict Parkgate industrial estate. A chi-squared test could not be performed in this instance as the data frequencies were too low.

The analysis shows that the 'open' or 'closed-in' nature of the views is an important aspect in Rotherham and Slough respondents' preference assessments. The frequencies for the preference explanations 'open' and 'closed-in' are high for these photographs depicting the Rotherham and Slough trading estates, and the civic offices (stimuli 1, 2 and 4).

Respondents' familiarity and knowledge of the views displayed appears to bias preference judgements against these scenes. For example, explanations such as 'cold' and 'draughty' are more frequently supplied by Rotherham respondents in response to the view depicting Rotherham bus station. Similarly, Slough respondents more frequently use 'eyesore' to describe the view of the derelict shops and houses at Crown Corner, Slough.

The photographic quality and technical composition of the views displayed appears to be of greater importance to Rotherham respondents. The single most important aspect is the distance of the views displayed. It would seem that longer distance photographs are preferable. The frequency of preference explanations referring to 'longer distance photographs' is considerably higher for Rotherham respondents (49) than Slough respondents (25) for the photographs depicting the Rotherham and Slough trading estates, civic offices, Slough High Street and the derelict site on Frederick Street, Rotherham (stimuli 1, 2, 4, 5 and 9). Only a handful of respondents consider the photographs of the bus station and Queensmere shopping centre (stimuli 3 and 6), to be 'too close'. Explanations which refer to the 'interest' of the photographic content of the views of Slough High Street and the civic offices have similarly small frequency scores. Researchers who have employed photograph surrogates of environmental scenes have noted that the quality and technical composition of the photographs used, have influenced respondents' perception or preference assessments. However in this study, such effects have been shown to be negligible.

Chi-squared tests were carried out on the preference explanation data for each photograph to ensure that the frequency data patterns were not merely due to chance variation but that an association exists between respondent town of residence and the preference explanations supplied. The results shown in Table 4.2.11.3 indicate that for eight of the ten photographs, a significant (0.05) to very significant (0.01) association exists between town of residence and preference explanations. However the chi-squared results for the frequency data for two photographs, Slough industrial estate (view 1) and the derelict and boarded-up site along Frederick Street, Rotherham (view 9) were shown not to be statistically significant.

Table 4.2.11.3 Chi-squared tests of association between place of residence and preference explanations for each photograph displayed

Photograph	Chi-squared	Degrees of freedom	Significance level
1	8.54	6	Not significant
2	21.64	8	0.05
3	27.92	8	0.01
4	13.73	6	0.05
5	13.88	7	0.05
6	43.39	9	0.01
7	24.18	6	0.01
8	36.97	5	0.01
9	4.21	4	Not significant
10	47.77	5	0.01

The analysis of preference explanations supplied by both Rotherham and Slough respondents has demonstrated a remarkable degree of similarity. The most frequently supplied explanations relate to the 'condition' and 'style' of the views displayed during the preference test. Some differences do exist between the Rotherham and Slough results but are limited to the frequency of use of these particular explanations with reference to 'concrete' 'dislike' and 'aesthetic', however the variations are not supported by chi-squared tests of statistical significance. Bias against 'local eyesores' is shown to be common among Rotherham and Slough respondents. Some explanations which refer to 'condition', 'style', 'colour', 'lighting' 'aesthetics' and 'dislike' are reiterated by respondents for more than one photograph.

Finally, it has been shown that the quality and technical composition of the photographic surrogates employed in the preference test do not appear to affect respondents' preference assessments.

4.3 Analysis of the Rotherham and Slough Respondents' 'Different' Preference Explanations

This section examines the preference explanations supplied by respondents from only one of the interview towns. For example, it considers those preference explanations provided by Slough respondents but not reiterated by the Rotherham sample. The purpose of the analysis is to identify the most common 'different' explanations supplied by the two groups. The categorisation system used in this analysis is described at the beginning of the Chapter (4.1). As many of the different explanations were provided only once or twice, the results discussion is based on the explanation categories' frequency totals. The explanation frequency tables are displayed at Appendix III.

4.3.1 Discussion of Analysis Results

The preference explanation frequencies and category frequencies referred to in the following discussion, are displayed in tabular form at Appendix III.

Most of the different preference explanations were supplied only once or twice during the preference test. However the preference explanation 'familiar' displays a high frequency in the Rotherham respondents explanation frequency tables for stimuli 7 and 9, and the Slough respondents results for stimuli 1, 5 and 6 (see Tables 13, 17, 2, 10 and 12). In this context, 'familiar' explains the respondents' preference judgement, it does not refer to the respondents' recognition of the views displayed during the preference test. For instance many Rotherham and Slough residents recognised local views but only used the expressions 'because its familiar/because I know it' to qualify particular preference selections.

The 'style' categories have the highest frequency totals in the Rotherham and Slough results for stimuli, 1, 3, 4, 5, 6 and 7, and the Slough respondents results for stimuli 2 and 9 (see Tables 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 4 and 18). These results, and those of the preceding analysis section (4.2.) show that the 'style' of the buildings displayed in the townscape views, is one of the most important considerations in respondents' preference assessments for both Rotherham and Slough respondents.

When the explanations contained in the 'comparisons' categories are examined, a bias against particular local scenes is discernable. Most of the comparisons made by Rotherham respondents in response to the photograph depicting Rotherham Civic Offices (stimulus 4) are unfavourable; they include explanations such as 'like an institution', and 'like an army barracks' (see Tables 7 and 8). On the other hand, comparisons made by Slough respondents are more favourable, such as 'like a hotel'. A similar bias occurs in the results for the view of Slough High Street (stimulus 5) (see Tables 9 and 10). Slough respondents made more unfavourable comparisons than Rotherham respondents. This predjudice against particular local views was detected in the preceding analysis section, in the Rotherham and Slough residents response to stimuli 3, 7 and 8.

The explanation frequency results show that the emotions evoked by the different photographs vary. The views of the bus station and the Queensmere shopping centre arouse mostly negative emotions, with a preponderance of responses such as 'depressing' 'unfriendly', 'boring' and 'impersonal' supplied by Rotherham and Slough residents (see Tables 5, 6, 11 and 12). Slough respondents' feelings about the view of Slough trading estate are more mixed (see Table 2). Among some respondents, the view arouses happy memories and affection, others consider it is 'boring', 'inhospitable' and 'depressing'. The photographs of the derelict shops and houses at Crown Corner and the derelict Parkgate industrial site also evoke a mixture of emotions (see Tables 15, 16, 19 and 20). Some respondents look upon the scenes with nostalgia, others fear the danger to personal safety if one visited the areas depicted. The variety of emotions evoked by the photographs is very significant, it supports the idea that the environmental image provided by the photographic surrogates has connotations over and above the purely visual aspect.

Most of the preference explanations relating to photographic quality and technical composition appear in the Rotherham respondents' results for stimuli 2 and 8 (see Tables 3 and 15). The photograph depicting Eastwood Trading Estate (stimulus 2) was praised for its content and brightness. The photograph of the derelict shops and houses at Crown Corner (stimulus 8) was criticised for it's 'restricted' and 'blocked' view and poor lighting. Both photographs were criticised for their lack of clarity.

Rotherham respondents appear to be aware of the gradual disappearance of the older Rotherham buildings but seem more concerned about the failure to develop sites after old property has been demolished and cleared. On the other hand, Slough residents are more concerned about the loss of 'old Slough'. The difference in attitudes is explicable. During the course of the survey the author observed a large number of vacant derelict sites in and around Rotherham. They were areas where old, derelict property had been demolished and for the most part cleared, leaving areas of rubble now partially covered with rough grass and weeds. Fewer vacant derelict sites were observed in and around Slough. Those that were seen, tended to be smaller and screened with corrugated iron sheeting. It is therefore hardly surprising that Rotherham respondents felt so strongly about the need to complete redevelopment schemes underway, when they were surrounded by so many vacant derelict sites. A vast amount of redevelopment has taken place in Slough, especially over the past twenty years. It has radically transformed Slough and has left few nineteenth century or more traditional buildings. In Rotherham a large amount of redevelopment has also occurred, but its impact on the original townscape has been less radical. Developments were more gradually introduced and a number of older, traditional and historical townscape features remain. This could explain the Slough respondents' overriding concern about the demise of the traditional Slough townscape. Had redevelopment been so intensive and so rapid in Rotherham, as it occurred in Slough, it is likely that the Rotherham residents would reciprocate the sentiments of the Slough residents.

The analysis of the different preference explanations supplied by Rotherham and Slough respondents has supported a number of the findings of the preceding analysis section. Respondents demonstrate a bias against some of the local views displayed, building style is seen to be an important aspect of preference assessments, Photographic quality and composition is shown to have a limited effect upon preference judgements. The analysis highlights other important aspects such as the variety of emotions evoked by particular townscape views, and the differences between Rotherham and Slough respondents' attitudes towards the redevelopment of their townscapes.

4.4 Analysis of the Stimuli Clusters Using Preference Explanation Data

This section examines the stimuli projection clusters observed in the MDPREF scaling programme configurations and described in Chapter 3.

The analysis uses 'identical' preference explanations supplied by Rotherham and Slough respondents to explain the stimuli clusters. The identical preference explanations are described in a preceding section (4.2) which also contains the explanation frequency results.

In many of the MDPREF programme solutions, three distinct clusters of stimuli projections on to the different resident groups' average subject vectors are observed. The clusters are: a least preferred stimuli cluster of points 10, 8 and 7; a middle preference range cluster consisting of stimulus points 6, 2, 9 and 1; and a cluster containing the most preferred stimuli, points 3, 5 and 4. If similar preference explanations appear in the results for all the stimuli members of a particular cluster, it might aid the interpretation of the linkages between the cluster members. It is also possible that an analysis of the types of explanations used in each cluster might explain what differentiates one cluster from another.

4.4.1 Analysis Of The Least Preferred Stimuli Cluster

The least preferred stimuli cluster consists of stimulus 10 (Parkgate derelict industrial site, Rotherham), stimulus 8 (the derelict shops and houses at Crown Corner, Slough) and stimulus 7 (the derelict Victorian terraced houses on Fitzwilliam Road, Rotherham).

The purpose of this analysis is to identify preference explanations common to each of the members of the stimuli cluster in order to assist cluster interpretation.

The preference explanation categories 'visual condition' and 'dislike' occur in all three stimuli results and possess high frequency scores for both Rotherham and Slough residents (see the preference explanation frequency tables 4.2.7.1, 4.2.8.1 and 4.2.10.1 in section 4.2)

The larger preference explanation frequencies (normally those exceeding ten frequency counts) contained within the 'visual condition' categories for the Rotherham and Slough residents results for stimuli 7, 8 and 10 are displayed in Table 4.4.1.1. It is not surprising that the preference explanation 'derelict' has a high frequency score for all three stimuli, and that explanation 'eyesore' is common to the cluster group. The explanations 'neglected' or 'rundown' and 'old'; appear in stimuli 7 and 8 results. The preference explanation 'have potential' is common to stimuli 7 and 10, and 'untidy' occurs in the results for stimuli 10 and 8.

Visual Condition Pref.Explanations		Frequency	
		Rotherham	Slough
Stimulus 10	eyesore	4	11
	derelict	10	2
	dirty	7	10
	has potential	2	9
	untidy	2	8
Stimulus 8	untidy/scruffy	25	43
	neglected/rundown	35	12
	derelict	32	30
	eyesore	4	21
	old	12	9
Stimulus 7	derelict/dilapidated	69	85
	neglected/run down	20	12
	have potential	9	20
	have no potential	11	5
	no windows	16	5
	old	18	17
	eyesore	13	6

Table 4.4.1.1 Least Preferred Stimuli Cluster: Visual Condition Preference Explanations

The 'visual style' and 'recommendation' explanation categories appear in the results for stimulus 7 and 8, the 'recommendations' category is also observed in the stimulus 10 results but displays only low frequency scores. The 'emotions' categories contain high frequency scores in the least preferred stimuli 7 and 10 results (see the frequency tables in Section 4.2). The preference explanations 'more character', 'restore', and 'develop', 'or improve' found within the former categories, are common to stimuli 7 and 8. 'Depressing' appears in the 'emotion' categories for stimuli 7 and 10 (see Table 4.4.1.2).

	Preference Explanations	Frequency	
	Visual Style	Rotherham	Slough
Stimulus 7	traditional/not modern	7	20
	more character	1	11
Stimulus 8	more space	2	7
	more character	1	5
	Recommendations		
Stimulus 7	demolish it	19	6
	restore it	6	18
Stimulus 8	improve/develop it	4	5
	tidy-up	7	3
	Emotions evoked		
Stimulus 7	sad/pity	9	14
	depressing	10	10
Stimulus 8	sad	1	2
	arouses curiosity	1	1
Stimulus 10	interesting	5	8
	could explore it/arouses curiosity	4	5
	depressing	4	1

Table 4.4.1.2 Least Preferred Stimuli Cluster: Visual Style, Recommendations And Emotions Preference Explanations

4.4.2 Summary Of Results

(i) The preference explanations 'derelict', 'dislike' and 'eyesore' are common to all three members of the least preferred stimuli cluster. These common descriptions of stimuli 10, 8 and 7 are also plausible explanations for the linkages between the stimuli points that make up the least preferred cluster.

(ii) Along several residents groups' average subject vectors, stimuli 7 and 8 lie close together. The preference explanations common to both stimuli, which describe the 'character' of the buildings and recommend they are 'restored', or 'improved' could account for the close proximity of the stimuli on the average vectors.

(iii) A number of Rotherham and Slough respondents consider that the scenes depicted in stimuli 7 and 10 are 'depressing'. It is possible that such an explanation could account for the occasional groupings of stimuli 7 and 10 on some residents groups' average subject vectors.

4.4.3 Analysis of the Middle Preference Range Stimuli Cluster

The middle preference range cluster consists of stimulus 1 (Slough Trading Estate), stimulus 2 (Eastwood Industrial Estate, Rotherham), stimulus 6 (Queensmere Shopping Centre, Slough) and stimulus 9 (the derelict site on Frederick Street, Rotherham).

The purpose of this analysis is to identify preference explanations common to each of the members of the stimuli cluster, in order to assist cluster interpretation.

The preference explanation frequency categories 'visual style' and 'visual condition' occur in all four stimuli results and possess high frequency scores for both Rotherham and Slough residents (see the preference explanations frequency tables 4.2.1.1, 4.2.2.1, 4.2.6.1. and 4.2.9.1 in section 4.2).

The larger preference explanation frequences (normally those exceeding ten frequency counts) contained within the 'visual style' categories for the Rotherham and Slough residents results for stimuli 1, 2, 6 and 9 are displayed in Table 4.4.3.1. The preference explanations common to each of the four stimuli, refer to the 'open', or 'closed-in' nature of the views depicted in the stimuli. Stimuli 1, 2 and 9 display high frequency scores for the preference explanation 'open', while the opposite explanation which refers to a 'lack of space' or 'closed-in' aspect, have high frequency scores in the results for Stimulus 6.

	Visual Style Pref.Explanations	Frequency	
		Rotherham	Slough
Stimulus 1	open/space/not closed in	26	15
Stimulus 2	open/space	42	47
Stimulus 6	buildings on top of you/very built up/buildings too close together	11	9
	enclosed/closed-in/shut-in/insufficient space/claustrophobic concrete (slabs/blocks)	17	7
	modern	11	5
Stimulus 9	more space/open/not closed-in	12	14
	built-up/buildings very close together	5	14
	pot plants improve view	10	6

Table 4.4.3.1 Middle Preference Range Stimuli Cluster: Visual Style Preference Explanations

Opposite (or bi-polar) adjectives are again supplied by Rotherham and Slough residents in respect of the 'visual condition' of the views displayed by the middle preference range stimuli cluster. In stimuli 1, 2 and 6, the opposite explanations 'clean' and 'dirty' have high frequency scores, and in stimuli 1, 2 and 9, 'tidy' and 'untidy' explanations display high frequency scores (see Table 4.4.3.2.).

	Visual Condition Pref.Explanations	Frequency	
		Rotherham	Slough
Stimulus 1	better kept	11	2
	tidy/neat	29	30
	clean	11	19
Stimulus 2	tidy	4	12
	clean	13	10
	poorly kept	28	12
	untidy	6	10
Stimulus 6	not derelict	11	5
	dirty	6	12
Stimulus 9	untidy/cluttered	3	13
	unfinished/incomplete	19	5

Table 4.4.3.2 Middle Preference Range Stimuli Cluster: Visual Condition Preference Explanations

Bi-polar adjectives are also observed within the 'visual lighting' and 'visual colour' categories for stimuli 2 and 6, see Table 4.4.3.3. The opposite explanations 'light' and 'dark' have high frequency scores in stimuli 2 and 6 results. Also the favoured natural 'green' colours of the 'grass' and 'fields' of stimulus 2, and described by Rotherham and Slough residents, contrast vividly with the descriptions of the less favoured, man-made, 'dull' and 'drab' colours of the buildings depicted in stimulus 6.

	Preference Explanations	Frequency	
	Visual Lighting	Rotherham	Slough
Stimulus 2	light/bright	18	11
Stimulus 6	dull/dark	59	49
	Visual Colour		
Stimulus 2	grass/fields/green	23	29
Stimulus 6	dark colours	13	7
	drab	6	10
	stone dull	4	10

Table 4.4.3.3 Middle Preference Range Stimuli Cluster: Visual Lighting And Visual Colour Preference Explanations

4.4.4 Summary of Results

(i) No single preference explanation links all four members of the middle preference range stimuli cluster.

(ii) In the Rotherham and Slough respondents' results, opposite (or bipolar) adjectives are observed in the 'visual style' preference explanations categories for each of the four stimuli. A large number of respondents refer to the 'open' nature of the views depicted by stimuli 1, 2 and 9 and the 'closed-in' or 'enclosed' nature of stimulus 6.

(iii) A similar response occurs with respect to the 'visual condition' of the stimuli. The preference explanations 'clean' or 'dirty', are common to stimuli 1, 2 and 6, and 'tidy' or 'untidy', appear in the results for stimuli 1, 2 and 9.

(iv) The tendency is again repeated, although restricted to fewer stimuli, with respect to the 'visual lighting' and 'visual colour' of stimuli 6. Antonymous descriptions 'light' and 'dark' are used by Rotherham and Slough residents in response to stimuli 2 and 6. Also the 'green' colours of the 'grass' and 'fields' in stimulus 2 are viewed in contrast to the 'dull' and 'drab' colours of the buildings in stimulus 6.

(v) The results suggest that a large number of Rotherham and Slough respondents judge the views depicted by the middle preference range stimuli cluster, according to style and condition. The most common preference explanations supplied relate to the views 'open' or 'closed-in' nature, and their 'clean' or 'dirty', 'tidy' or 'untidy' condition.

(vi) On several residents groups' average subject vectors, the members of the middle preference range stimuli cluster appear in pairs, or as a group of three, with a single stimulus point located some distance away. The occurrence of so many antonymous preference explanations in the results for stimuli 1, 2, 6 and 9, might explain the variety of stimuli groupings observed within this cluster.

4.4.5 Analysis of the Most Preferred Stimuli Cluster

The most preferred stimuli cluster consists of stimulus 3 (Rotherham Bus Station), stimulus 4 (Rotherham Civic Offices and Public Library) and stimulus 5 (Slough High Street).

The purpose of this analysis is to identify preference explanations common to each of the members of the stimuli cluster, in order to assist cluster interpretation.

The preference explanations frequency categories 'visual style', 'visual condition' and 'aesthetic' occur in all three stimuli results and possess high frequency scores for both Rotherham and Slough residents (see the preference explanations frequency tables 4.2.3.1, 4.2.4.1 and 4.2.5.1 in section 4.2)

The larger preference explanation frequencies (normally those exceeding ten frequency counts) contained within the visual style categories for Rotherham and Slough residents results for stimuli 3, 4 and 5, are displayed in Table 4.4.5.1. The preference explanations which refer to the 'open' nature of the views and the 'modern' style of the buildings depicted are common to each of the three stimuli.

	Visual Style Pref. Explanations	Frequency	
		Rotherham	Slough
Stimulus 3	open/airy/space	12	4
	modern	16	10
	concrete (lumps/blocks)	18	9
Stimulus 4	attractive building shapes	3	18
	new	7	17
	modern	19	24
	open	37	19
	like building design	6	11
	concrete	24	10
	lawn complements buildings	21	3
Stimulus 5	open	18	3
	modern	14	6

Table 4.4.5.1 Most Preferred Stimuli Cluster: Visual Style Preference Explanations

Those preference explanations that refer to the visual condition of the views, 'clean' and 'tidy' and the aesthetic qualities of the views, 'nice' or 'attractive' appear in the stimuli results for each member of the most preferred cluster (see Table 4.4.5.2).

	Visual Condition Pref.Explanations	Frequency	
		Rotherham	Slough
Stimulus 3	clean	38	38
	tidy	10	19
	not derelict	16	11
Stimulus 4	well kept	11	5
	tidy/neat	25	29
	clean	20	20
Stimulus 5	tidy	2	6
	clean	7	8
	Aesthetic		
Stimulus 3	nice/pleasant	9	12
Stimulus 4	nice/pleasant/attractive	15	27
Stimulus 5	nice/attractive/lovely	5	9

Table 4.4.5.2 Most Preferred Stimuli Cluster: Visual Condition And Aesthetic Preference Explanations

4.4.6 Summary of Results

(i) The preference explanations 'open', 'modern', 'attractive', 'nice', are common to all three members of the most preferred stimuli cluster. These respondent-supplied preference judgement reasons are also very plausible explanations for the clustering of stimulus points 7, 8 and 10.

(ii) The results suggest that a large number of Rotherham and Slough residents judge the views depicted by the most preferred stimuli cluster according to style, condition and attractiveness.

4.4.7 Summary of Results

The analysis of the 'identical' preference explanations supplied by Rotherham and Slough respondents propose a number of very plausable explanations for the three distinct clusters of stimuli observed on many residents groups' average subject vectors.

Several common preference explanations link the members of the least preferred stimuli cluster. A large number of Rotherham and Slough respondents dislike the derelict views depicted in stimuli 7, 8 and 10, and consider the scenes to be 'eyesores'.
The close proximity of stimuli 7 and 8 on some groups' average vectors, might be explained by the similar reactions those scenes evoke in some respondents. Although the buildings are derelict, some residents consider they have character and are worth restoring.

No single preference explanation links all members of the middle preference range stimuli cluster but many Rotherham and Slough respondents appear to judge the views according to their condition and degree of 'openness' or 'enclosure'. In several cases, the explanations used to describe respondents' preferences for the stimuli, may be matched with antonymous explanations used by other respondents to describe the same stimuli. For example, 'open' and 'closed-in', 'clean' and 'dirty', 'tidy' and 'untidy', 'tight' and 'dark' and 'colourful' and 'drab', appear in the stimuli cluster results. It is likely that the occurrence of so many antonymous explanations not only explains the variety of the stimuli groupings observed within the cluster, but reflects the very erratic positioning of the four stimuli along many resident groups' average subject vectors.

Rotherham and Slough respondents appear to judge the most preferred stimuli according to the visual style and condition of the views, as they do in the other two stimuli cluster groups. The common preference explanations 'open', 'modern', 'clean' and 'tidy' link the stimuli members of this cluster group.

CHAPTER FIVE:

Analysis of the Questionnaire Data

5. Introduction

This chapter examines the results of the analysis of the questionnaire data. The analysis was performed by computer, using the 'Statistical Package for the Social Sciences' (SPSS). The chapter begins by describing the objectives of the computer analysis and the programme format. The second section summarises the results of the SPSS 'frequencies' and 'cross tabs' options, results tables are displayed at Appendix IV. The final section evaluates SPSS as the most suitable analysis package for the data generated by the type of questionnaire used in this study. The questionnaire is assessed in terms of its efficiency and adequacy in producing relevant data to answer the questions posed in connection with the research project objectives.

5.1 The SPSS Programme

The SPSS programme was originally written for social scientists for the statistical analysis of tables of experimental or survey results. The programme is designed to handle non-numerical data of the type generated by open and closed response questionnaire surveys, such as the one used in this project.

The SPSS programme control information and data were input into separate files. The control file (SPS.FIL) and data file (SPS.DAT) were first prepared on punch cards then transferred to the DEC system-10 computer disc files. Before the programme was run, the control and data files required a considerable amount of editing. The text-editor SOS ('Son of Stopgap') is used to edit and create SPSS files on disc. It is a line-based editing system with character searching and substitution facilities, it was easy to learn and employ.

The programme was required to perform three different statistical functions: listings; frequency counts; and cross tabulations. It was necessary to list respondents who showed particular variable characteristics. For example, lists of all the male and female respondents (by reference numbers) were needed before their respective paired comparison dominance matrices could be input into the MDPREF scaling programmes, described in chapter 3. Frequency counts of particular respondent characteristics (or programme variables) were required in addition to cross tabulations of two or more variables. These results tables supply general information on the respondent sample for use in supporting and or, explaining the preference test and MDPREF scaling results.

In order to avoid duplicating the information contained in the control file (SPS.FIL) on several command files, an advanced feature of SPSS was engaged to produce a system file. A system file may be retained in a computer user's area and accessed by the 'GET FILE' command.

In the first analysis, the creation of the system file 'FIRST' (see Figure 5.2.1) avoided duplicating the large SPSS control file in the various SPSS programmes that were subsequently written to produce data lists, frequency counts and cross tabulation results. Condensed versions of these programmes are shown in figures 5.2.2, 5.2.3 and 5.2.4.

Figure 5.2.1 SPSS System File 'FIRST'

```
RUN NAME            SYSTEM FILE 'FIRST'
VARIABLE LIST       REFNO, SEX, AGE, T...........
VAR LABELS          REFNO REFERENCE NUMBER/
                    SEX  SEX /
                    AGE  AGE /
                    T TOWN..............
VALUE LABELS        SEX(1) MALE (2) FEMALE/
                    AGE(1) 16-30 YEARS (2) 31-50 YEARS
                       (3) 51-65 YEARS (4) 66-81 YEARS
                    T  (1) ROTHERHAM (2) SLOUGH......
INPUT FORMAT        FIXED (1A4, 1X, F1.0, 2(1X,F2.0)....
INPUT MEDIUM        SPS.DAT
N OF CASES          240
READ INPUT DATA
SAVE FILE           FIRST
FINISH
```

Figure 5.2.2 SPSS Variable Listing Programme

```
RUN NAME          VARIABLE LISTINGS BY REF NO
GET FILE          FIRST
LIST CASES        CASES = 240/VARIABLES = SEX, AGE
FINISH
```

Figure 5.2.3 SPSS Frequency Count Programme

```
RUN NAME          FREQUENCY COUNTS FOR SEX AND AGE
                  VARIABLES
GET FILE          FIRST
FINISH            INTEGER = SEX (1,2) AGE (1,4)
```

Figure 5.2.4 SPSS Crosstabulation Programme

```
RUN NAME          CROSS TABULATIONS OF TOWN, AGE
                  AND SEX VARIABLES
GET FILE          FIRST
CROSSTABS         TABLES = T by SEX /
                  TOWN by AGE /
                  SEX  by AGE /
                  SEX by AGE by T
OPTIONS           3, 4, 5, 7, 9
STATISTICS        1, 2
FINISH
```

5.2 Discussion of Results

This section describes the results of the SPSS 'frequencies' and 'crosstabs' options. The results tables referred to are displayed in Appendix IV.

In Rotherham and Slough, more women than men participated in the interview survey. Women account for 58% of the Rotherham respondent sample and 67% of the Slough sample (see Table 1). This result was not unexpected considering the nature and timing of the survey. It was carried out on a door to door random sampling framework, mainly during the daytime hours, 10 a.m. until 5 p.m. (see Table 2), when the majority of household occupants available for interview were most likely to be housewives. Table 3 clarifies this, housewives represent 36% of the Rotherham female sample and 31% of the Slough female sample. Most of the other women interviewed described themselves to be retired, pensioners, or in part-time employment. More men participated in the Rotherham survey than in the Slough survey. However in the Rotherham male sample, more were retired, unemployed and fewer worked full time than in the Slough male sample (see Table 3).

The Rotherham and Slough respondents were categorised into four age groups (see Tables 4 and 5). The proportion of respondents within each age group is similar for the Rotherham and Slough. The majority (76%) of the residents interviewed are aged between 31-50 years and 51-65 years. The Rotherham sample contains fewer young residents (16-30 years) but more elderly residents (66-81 years) than the Slough sample.

Interviewees were classified according to their socio-economic group (SEG). The proportion of Rotherham and Slough respondents in the different socio-economic groupings are similar (see Table 6). The only significant variations occur in SEG 6 and the combined SEG 7 and 10. In the Rotherham sample, SEG 9 accounts for 47% of the respondents, but only 28% of the Slough respondents. However only 20% of the Rotherham respondents are found in SEG 7/10, compared with 38% of the Slough respondents.

The majority of Rotherham and Slough respondents live in rented council accommodation (see Table 7). The proportion of council tenants in the Rotherham sample (87%) is considerably greater than the proportion of Slough council tenants (59%). The second most common form of tenure is private owner-occupier tenure, 34% of Slough respondents fall within this category compared with 13% of Rotherham respondents. Since this project attempts to develop a better understanding of the town-scape perception of lower socio-economic groups, the survey was confined to council housing estates; it was assumed that the majority of council tenants fall within the lower socio-economic categories. The unexpected high proportion of Slough owner-occupiers (in former council property), reflects Slough Council's longer established policy of selling-off property to sitting tenants and the rising social status of residents in predominantly council-owned housing areas. More and more lower socio-economic group members, particuarly in SEG.9, prefer to buy rather than rent their council accommodation.

The comparatively low proportion of Rotherham owner-occupiers of former council property, is probably due to the Rotherham Council's reluctance to sell-off property to sitting council tenants, before the implementation of Housing Act in 1980.

In the Rotherham sample, most of the respondents interviewed (66%) were indigenous to Rotherham unlike the majority of the Slough respondents (87%) who were neither born or raised in Slough (see Table 8 and 9). The vast majority of non-indigenous respondents (83%) have lived in Rotherham or Slough for more than sixteen years, and many (57%), have lived there for more than thirty one years (see Table 10). None of the non-indigenous Rotherham respondents have lived in Rotherham for less than two years, but 5% of the Slough non-indigenious sample moved to Slough during the two year period preceding the interview survey (1979-1981). It is likely that the decline of the British Steel works in Rotherham, once the single largest local employer, checked the influx of new settlers. In Slough, where the work force is less reliant on any single industry, new residents settled in the town during the two year period preceding the survey.

Rotherham and Slough respondents display very similar levels of local environment experience. Most respondents frequently visit a large number of different local areas (see Tables 11 and 12). Local visiting pattern and frequency respondent-groupings were not used in the MDPREF scaling programmes in Chapter Three. Scaling solution variations could not be attributed to local environmental experience because most of the respondents displayed homogeneous levels of local environmental experience. Another measure of local environmental exposure involved asking the respondents what principal means of transport they used to visit local destinations and whether they varied their route to and from those areas. Public transport (bus) was the principal means of transport for 53% of the total respondents (see Table 13), which meant that over half of the sample had no control over the routes taken. The remainder of the sample, consist of car and motorcyle drivers and passengers, cyclists and walkers, but only 30% of these respondents vary routes to and from the local areas visited.

In the Rotherham and Slough samples, levels of non-local environmental experience vary quite considerably (see Table 14). Environmental experience is measured in terms of the respondent's non-local visiting frequency. It is based upon the frequency with which a respondent leaves the interview town to visit other towns, rural, coastal and foreign destinations. In Chapter Three, respondent groups with different non-local visiting frequencies are subjected to MDPREF scaling (see 3.14 and 3.15).

The majority of visits to other towns, rural and coastal areas are day visits for the purpose of shopping, to see family or friends, or simply to have a pleasurable day trip. However a large number of visits (51%) to coastal resorts are of one or two weeks duration. Variations exist between the Rotherham and Slough respondent samples only with respect to the distances travelled to reach non-local destinations (see Tables 15 and 16). On day visits to Rural areas in particular, Rotherham respondents travel considerably further than Slough respondents. Although this might suggest that the samples have very different travelling patterns it more likely reflects the different quality and variety of the countryside around Rotherham and Slough (see Table 17 and 18).

It was considered likely that a respondent's satisfaction or dissatisfaction with living in the interview town might (consciously or subconsciously) influence preference judgements in favour of, or against, local townscape views. Respondents were asked if they would move away from Rotherham or Slough should an opportunity to do so ever arise. The majority of the Rotherham sample (76%) expressed a desire to remain in Rotherham, but appreciably more of the Slough respondents (56%), believed they would move (see Table 19). In Chapter Three (3.5.12) MDPREF scaling is performed on groups of residents who express satisfaction and dissatisfaction with living in Rotherham and Slough.

It was suggested that respondents' preference judgements towards local unattractive townscape views might be influenced by respondents' attitudes towards the appearance of the interview towns. For example an unfavourable attitude could bias preference judgements against the local views displayed in the preference test. In order to ascertain the nature of the respondents' attitude, respondents were asked if they considered their town was pleasing to look at. The results differ quite considerably for the Rotherham and Slough samples (see Table 20). Most of the Rotherham respondents (66%) found their town pleasing to look at, whereas only 38% of the Slough respondents believed Slough was pleasing to the eye.

Respondents were asked to list the local town features they considered unpleasant to look at (see Table 21). The purpose of doing so was to check the representiveness of those townscape views photographed and displayed as unattractive views in the preference test. The ten unattractive townscape stimuli used in the preference test had been identified by Rotherham and Slough respondents during a pre-pilot survey. The view displayed in stimulus 3 (Rotherham bus station and car park) is the only unattractive stimulus not listed as an unpleasant townscape feature by the main Rotherham survey sample. The omission from the listing is surprising when one recalls that stimulus 3 was judged to be less preferable than stimulus 4 (Rotherham Public library and Civic Offices), on the majority of the MDPREF scaling configurations, and as stimulus 4 displays such a high frequency count in the Rotherham unpleasant features listing. The listing frequencies of the remaining five Rotherham stimuli displayed during the preference test are shown in Table 22. Although the frequencies do not correspond exactly with the preference rankings observed along the average subject vectors in the MDPREF configurations, two of the least preferred cluster of stimuli points (stimuli 7 and 10), have high frequency counts in the unpleasant townscape features list (see Table 21).

The view displayed in stimulus 8 (derelict shops and houses at Crown Corner, Slough is the only unattractive stimulus not listed as an unpleasant townscape feature by the main Slough survey sample (see Table 23). The omission may be due to the redevelopment of the area photographed, which began during the course of the Slough survey. Each of the other Slough unattractive views shown in the preference test display high frequency counts in the unpleasant Slough townscape features listing (see Table 24).

There is a considerable degree of similarity between the types of townscape views and features considered to be attractive by Rotherham and Slough respondents (see Tables 25 and 26). As one would expect parks, playing fields and recreation grounds are listed as attractive townscape features by a large number of Rotherham and Slough respondents. Old buildings, especially churches are also popular and in the Slough sample in particular, some of the new buildings such as the public library and the Johnson and Johnson building are considered to be attractive additions to the townscape. Respondents also consider several of the towns' outlying areas to be attractive local features, these areas are predominantly privately owned residential areas. A small number of Rotherham residents consider the new public library to be an attractive townscape feature, although twice as many Rotherham respondents describe this building as unpleasant to look at. Likewise, a handful of Slough respondents find the Queensmere shopping centre attractive while many more Slough respondents consider it to be an unpleasant townscape feature.

Respondents were asked whether they would like to see any changes made to improve the appearance of their town. The majority of respondents (73%) said they would like to see some changes implemented. Many of the improvements suggested by Rotherham respondents related to the numerous derelict and idle land and property sites that exist in and around Rotherham. The general feeling was that such areas should be put to some use, possibly grassed over until they could be properly redeveloped. Rotherham and Slough respondents expressed a preference for the older derelict property to be restored (if possible) and not allowed to run down until demolition became the only practical option. Respondents want to see fewer all-concrete buildings and consider bricks and stone to be preferable building materials. When concrete has to be used respondents feel that it s colour should blend in with the existing buildings surrounding the new development. Street and especially litter clean-up schemes were proposed by Slough respondents while Rotherham respondents suggested that the town buildings, river and canal should be cleaned. Finally respondents suggested that Rotherham and Slough town centres should be made more attractive by introducing more landscaping features such as trees and flower plants.

5.3 Assessment of the Questionnaire and SPSS Programme

A number of amendments were made to the questionnaire after the pre-pilot survey. Since these modifications (described in Chapter Two, 2.3) no further operational problems were encountered during the main questionnaire surveys in Rotherham and Slough. The questionnaire was easy to administer and well received by the respondents. It is possible that the rapport developed between the interviewer and respondent during the preceding preference test made respondents less wary and more receptive, many seemed to enjoy answering questions about themselves and their town. The time taken to complete the questionnaire varied from approximately fifteen to thirty minutes, in most cases it required considerably less time to complete than the preference test.

The main function of the questionnaire was to provide information which enabled the sorting of respondents according to certain shared characteristics, such as age and sex. The respondent groupings were then subjected to multidimensional scaling analysis. The questionnaire adequately performed this function. A number of the follow-up 'why' questions such as 'why would you rather live in a different town?' yield interesting results and help explain residents' dissatisfaction with living in the interview town, but never theless stray from the primary objective of the questionnaire which is to provide information for use in the multidimensional scaling analysis. Had the interviewer deleted such questions, she would have run the risk of losing information which might explain respondents' attitudes. Such a loss would be particularly seriousif multidimensional scaling had analysis shown that these attitudes influenced respondents' preference judgements. Such dilemas are common to social scientists who rely on deductive questionnaire data. The questionnaire employed in this study generated a large amount of information which required a considerable amount of post-coding before it could be input into the computer data files. However, the questionnaire supplied the author with a large degree insight into the life style and attitudes of the respondents studied. If the MDPREF analysis had revealed a relationship between preference judgements and respondents' attitudes to their town of residence or the towns' visual appearance, questionnaire information that might have appeared superfluous, could have assisted the interpretation of the MDPREF configurations.

The main disadvantage of using SPSS was that listings of groups of respondents who shared the same variable characteristics, could not be produced unless a large number of 'select-if' programme control commands for each of the respondent groups requiring identification were written. For example, a listing of all the Rotherham male respondents aged 16-30 years would require 'select-if' commands to differentiate: the Rotherham respondents from the Slough respondents; the male respondents from the female respondents and; the youngest respondent group from the three older respondent age groups. In view of the length of time it would have taken to write so many programme groups required for multidimensional scaling analysis (a total of 110), an alternative method of respondents listing was employed. SPSS was used to list the coded values of each of the variables required for MDPREF scaling. For example the SPSS listings displayed the coded values for the town, sex and age variables adjacent to each respondent number. Then by hand, respondents were sorted into groups which shared the same variable values, to produce lists of respondent reference numbers of all Rotherham males and then Rotherham males aged 16-30 years.

The other main problem encountered when using SPSS was that it proved to be very sensitive to the way in which programme control files were written. For instance, the SPSS programme would not run when the terminal keyboard 'tabs' were used to space and write the control programmes.

The greatest advantage of using SPSS for the analysis of questionnaire data such as that generated by the questionnaire administered in this study, is that the package was written specifically for survey data. The programmes requesting crosstabulation and frequency analysis were easy to write and operate, especially when the 'system file' facility was employed.

This assessment has shown that the questionnaire proved to be an adequate means of producing information required for multidimensional scaling analysis and interpretation. It was efficient in as much as it provided all the data it was required to produce but tended to generate rather more than was actually utilised. The SPSS programme was easy to operate but proved unsuitable for the production of data groupings such as these required for the MDPREF scaling programmes.

CHAPTER SIX:

Conclusions

6. It is time to reconsider the objectives of the study in light of the findings of the survey on residents' perception of unattractive townscapes and to evaluate the hypotheses suggested at the start of this investigation which stated that:

(i) a consensus of agreement exists at the negative extreme of the aesthetic scale as it does at the positive end; and

(ii) social, economic, environmental, temporal and attitudinal variables influence the assessment of environmental unattractiveness.

6.1 The Consensus of Agreement on Urban Unattractiveness

The results of the investigation have shown conclusively, that among residents of Rotherham and Slough, there is a consensus of agreement on the unattractiveness of ten photographs depicting aspects of the everyday townscape. Even when the respondent sample was subdivided according to age, sex, socio-economic status, town, indigenous or non-indigenous, environmental experience, length of residence and attitudes towards the local townscape and the group's preferences were subjected to MDS, all displayed consensus on the unattractiveness of the photographs. All grouped the scenes into three quite distinct preference clusters. (See Table 6.1)

6.2 Observer-Related Influences on Aesthetic Judgement

At the start of the investigation, it was hypothesised that nine different variables influenced aesthetic assessment. The preference test and subsequent MDS analysis proved that only three of those variables, town of residence, sex and age, have any significant relationship with aesthetic judgement. However their influence was not so far reaching as to interfere with the three clusters of aesthetic judgement, but produced a weaker consensus of agreement on unattractiveness and a more varied preference rating order within the three clusters.

Table 6.1 Photograph Preference Clusters

Least Preferred Cluster (most unattractive)		Middle Preference Cluster		Most Preferred Cluster (least unattractive)	
View No.	Location	View No.	Location	View No.	Location
10	Parkgate derelict industrial site, Rotherham.	1	Slough industrial estate	4	Rotherham Civic offices and public library
7	derelict terraced houses along Fitzwilliam Road, Rotherham.	2	Eastwood industrial estate, Rotherham	3	Rotherham bus station
8	derelict shops and houses at Crown Corner, Slough	6	Queensmere shopping centre, Slough	5	Slough High Street
		9	derelict and boarded up site, Frederick Street, Rotherham		

6.2.1 The Town Of Residence Effect

The results showed that Rotherham residents demonstrate a greater agreement on the unattractiveness of the townscape photographs than Slough residents. At first it was supposed that the effect was a result of the greater number of indigenous (Rotherham) residents and or, the greater overall satisfaction with the local townscape but MDS preference analysis refuted these suppositions.

Why then, should the town of residence affect aesthetic judgement? It is likely that this 'regional' effect reflects Rotherham residents' greater cohesion of feeling and reaction to the changes taking place in their local environment. In recent times, Rotherham has experienced much less redevelopment than Slough. It retains many more older buildings, e.g. Chapel on the bridge, and some features have been enhanced by thoughtful townscaping e.g. All Saint's Square (Views of the Chapel on the Bridge and All Saint's Church are displayed in Appendix V). Such places perpetuate feelings of local pride, a warmth, contentment and attachment to the place. They have focussed residents' environmental awareness into a common union of feeling against the destruction of the older familiar buildings and streets for the sake of redevelopment. In Slough, with the exception of the parks, no valued townscape features remain. There is nothing left to retain a cohesion of local sentiments let alone perpetuate it. Redevelopment in Slough has been so large scale, so rapid and so alien to traditional tastes, it has overridden the residents' anger at the destruction of the familiar townscape and frustration at the inability to impede or divert the process; it has destroyed the town's sense of place.

Slough residents may have once felt the feelings currently experienced by Rotherham residents but adaptation and acceptance of the nature and inevitability of redevelopment have eroded those feelings, making many residents resigned or indifferent to the fate of their townscape.

> "They can't make Slough any worse".
> "It's too late now, the damage is already done".
> "What can we do about it anyway".

(A selection of sentiments expressed by Slough residents interviewed in 1982).

It would seem that capitulation to the forces of uglification is the likely cause of Slough residents' weaker consensus of agreement on unattractiveness. Rotherham residents' more united stance against the degradation of their townscape is reinforced by a well-developed sense of place and produces a much stronger consensus of agreement on unattractiveness.

6.2.2 The Respondent Sex Effect

At the beginning of this inquiry, it was proposed that differences in functional vision between the sexes would make certain types of views more acceptable to one sex than the other. The MDS analysis of preferences did not support this hypothesis; for example, women do not consider industrial views any more or less unattractive than do men. Nevertheless the greater consensus of agreement on un-attractiveness among men and the weaker consensus among women requires explanation. Is it possible that the effect occurs because women are more open-minded in making judgements of aesthetic quality than men? For some reason women may consciously, or subconsciously, employ a wider and more varied range of aesthetic assessment criteria and therefore find it harder to make such precise and clear cut preferences as men. However it is more likely that men and women possess an equally varied range of assessment criteria, but among men, certain criteria may have considerably greater influence over judgements than they do among women. So much so that men might 'appear' to be more single-minded about aesthetic judgement than women.

6.2.3 The Respondent Age Effect

The influence of respondent age on aesthetic judgement is sometimes masked by the greater effect of respondent sex and town of residence. In the MDS preference analyses, older residents displayed a greater consensus of agreement on the unattractiveness of townscape scenes, than younger residents. This is not easy to explain since length of residence andbirth place were seen to have no affect on aesthetic judgement. I propose that the effect is produced by the quite different feelings evoked in residents of different ages. The weaker and more varied consensus of agreement an unattractiveness among younger residents may result because these respondents view the scenes more optimistically than older residents. They have to do so; they have grown up with the changes and see today's environment as 'the townscape of their age'. Subconsciously they may need to justify and make allowances for it, because after all, the current townscape and younger residents are products of the same time. Older residents are less likely to assess the scenes in such terms. They have witnessed the destruction of all or many of the particular buildings or types of buildings for which over the years, they have developed a feeling of attachment. The disappearance of familiar features which prompt their memories, jeopardise the security of those memories and may even represent their own mortality.

They experience a diminishing sense of belonging to their townscape as the link between the intangible memories of yesterday and the tangible physical real life experiences of today and tomorrow weaken; They became refugees in their home-towns. Older residents in Rotherham and Slough share a common resentment of today's townscape partly because it is modern and different, but also because it is created at the expense of the older familiar townscape features they value so much and which give them a sense of belonging.

6.3 The Importance of Condition And Style

In order to develop a better understanding of the perceptual dimensions responsible for aesthetic judgement we need to examine both components of the aesthetic process, the observer and the observed. Whilst it is important to identify the observer-related variables which influence judgement (such as town of residence, sex and age), it is equally important to consider if, and how, the physical nature of the objects observed affect the aesthetic response.

The analysis of the verbal explanations supplied by respondents to justify their preference selections attempts to do this (see Chapter 4.1). Explanations were first analysed for each individual photograph, then examined according to the three groups of aesthetic preferences.

The results demonstrate that a very strong similarity exists between Rotherham and Slough respondents on the types of explanations most frequently supplied for particular photograph preferences. Table 6.3 specifies the explanations and the photograph preferences to which they were most frequently related.

This indicates that not only is there a consensus of agreement on unattractiveness but there is a common usage of the types of evaluation criteria for particular scenes. The 'style' and 'condition' of the features displayed in the photographs is of great importance in the observers' aesthetic assessment of those scenes. Of course it might be the case that the supremacy of these two criteria above all others, is a direct result of the content of the control set of photographs used in the preference test. Perhaps if the investigation was repeated using unattractive townscape photographs with quite different picture content, it might produce commonly expressed evaluation criteria which are unrelated to style and condition. Any future inquiry along these lines could also identify and test preferences for a fully comprehensive range of unattractive urban features, and possibly predict the evaluation criteria used for different types of unattractive features.

Table 6.3 Most Frequently Supplied Preference Explanations

Style	Condition	Activity/Motion	Content Description
View 3 Rotherham bus station	View 1 Slough Industrial Estate	View 5 Slough High Street	View 10 Parkgate derelict industrial site Rotherham
4 Rotherham civic offices	7 Derelict terraced houses Fitzwilliam Road Rotherham		
6 Queensmere shopping centre Slough	8 Derelict shops and houses Crown Corner Slough		
9 Derelict site, Frederick Street Rotherham			

The examination of the verbal explanations by preference cluster produced some interesting results (4.2). Many respondents used the same explanations for each of the three least preferred (most unattractive) photographs. The views of Parkgate demolished industrial site (view 10) and the derelict houses at shops along Fitzwilliam Road, Rotherham (view 7) and at Crown Corner, Slough (view 8) were all described as 'derelict', 'eyesore' and 'disliked'. In addition, many respondents used the same explanations for the three most preferred (least unattractive) photographs. They described the views of Slough High Street (view 5), Rotherham Bus station (view 3) and the civic offices, Rotherham (view 4) as 'clean', 'tidy', 'open', 'modern', and 'attractive'. Explanations for the middle preference/aesthetic cluster of photographs were much more varied and even bipolar. Respondents considered the views of the Slough and Rotherham (Eastwood) Industrial estates (views 1 and 2), Queensmere shopping centre (view 6) and Frederick Street, Rotherham (view 9) to be both 'clean' and 'dirty', 'tidy' and 'untidy', 'open' and 'closed-in'. These findings show that the criteria used to assess the scenes at each extreme of the asethetic scale are consistent, but when the aesthetic quality of a scene is less apparent, the evaluation criteria became confused, contradictory and inconsistent.

6.4 The Economic Function Perceptual Dimension

A single theme or dimension which links the environmental scenes depicted in the photographs and the three preference groupings can be discerned. It may be defined as 'economic function' or 'usefulness'.

The most unattractive (least preferred) group of photographs depict scenes of no obvious economic function or use. The demolished Parkgate industrial site (view 10) serves no purpose at all, and the derelict houses and shops along Fitzwilliam Road (view 7) and at Crown Corner (view 8) are either bricked up or so utterly derelict they can no longer function as places of accommodation or retail trade.

Conversely, the least unattractive (most preferred) group of photographs depict scenes with quite apparent economic functions. The sound condition and orderliness of the scenes imply they are maintained and in use. In the photograph of Slough High Street (view 5), the shop lights and people suggest it is a busy and useful retail area. The neatness of the bus station and the waiting bus in the photograph of Rotherham bus station (view 3) inform the observer that the station is in use and an important component of urban life. In the photograph of the civic offices, Rotherham (view 4), the large number of parked motor cars, orderliness, good condition and recency of the buildings imply they currently serve some particular function, even if the exact nature of the function is less distinct; some non-local observers initially thought the buildings depicted were factories or hotels.

The discovery of the functional dimension can be used to redefine the extremes of the aesthetic/preference scale used in this inquiry as function (least unattractive or most preferred) versus non-function (most unattractive or least preferred). The photographs of the middle preference cluster are located along the scale at the point where the economic function or usefulness of the scenes depicted, become more debateable.

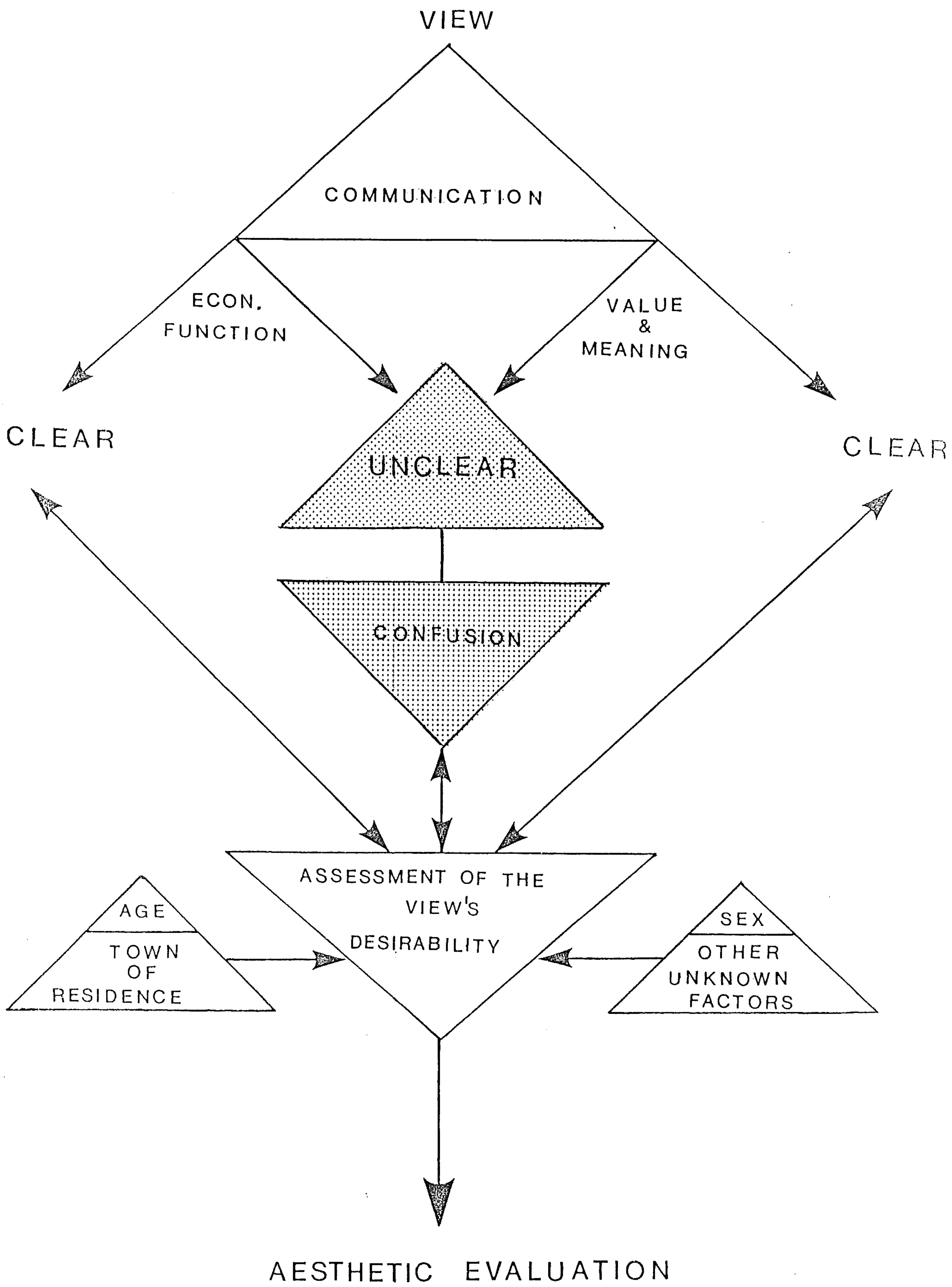
Views 1 and 2 are clearly industrial estates but the absence of heavy goods traffic and people in the photograph of Slough industrial estate (view 1) and the closed gate and overgrown scrub in the foreground of the photograph of the Eastwood Industrial estate, Rotherham (view 2), cast doubt in the observer's mind, on the success, economic value and usefulness of the areas. The Queensmere centre (view 6) looks very much like a shopping arcade but the lack of people and shop lights and the gloomy appearance imply that it might have closed-down, and is therefore no longer serving any useful function. At first glance Frederick Street, Rotherham (view 9) looks like part of a town centre, there are people milling about and a wide paved area, but the barricaded, boarded-up and inactive site across the road, cast doubt on the location, economic function and value of the area. The bipolar preference explanations used to describe this group of photographs and the great variation of preference ordering within the cluster are also indicative of the contradictions and confusion evoked by these scenes.

I do not propose that economic function is the only, or single most important perceptual dimension underlying the assessment of urban unattractiveness, but in this investigation, using the particular set of control photographs shown at (Appendix 1), it is clearly a common measurement criterion. Yet the physical characteristics of the scenes, such as the style, condition and activity play an important role in aesthetic evaluation, as do the observer influencing variables sex, age and town of residence. While it is possible that a different set of unattractive photographs might yield a completely different set of results and conclusions, it is worth noting that the findings of this investigation are compatible with those of earlier inquiries on urban perception and quality; this gives greater credence to the findings and conclusions of this study. Harrison and Sarre (1975) used principal component analysis on repertory grid data and identified the ugly/function versus beautiful/aesthetic as principal component of resident middle class housewives' perception of the city of Bath; Morris (1978) concluded that planners and students considered dilapidated buildings were the most unpleasant urban features; and Burgess (1978) discovered two dimensions of the connotative meaning of place, the emotive assessment of environmental quality and a place's pace of life.

6.5 Communication and Aesthetics

It is proposed that the clarity of communication between a view and observer is also an important factor in aesthetic evaluation. Communication is two-way process, characteristics of the view are assimilated by the observer who in turn, infers information about the view observed. This information might be quite apparent and supplied by signs or labels in view denoting it s function or value, or it might be inferred by the observer. For example in the photograph depicting Rotherham Bus Station (view 3), a bus is seen parked in a concrete structure, the likes of which an observer may have seen before, or possibly used, and knows to be a bus station; so without the aid of a 'bus station' label, the observer infers the function of that particular view.

Figure 6.5 The Aesthetic Process



Any information provided by this two-way communication is then assessed in terms of it s desirability or undesirability and subsequently incorporated into the process of aesthetic evaluation along with observer-related influences (town of residence, sex and age) and the condition and style of the view. Figure 6.5 depicts the aesthetic evaluation process. Objects or views which do not clearly convey information about themselves cannot be evaluated and so fall into the abyss of the middle aesthetic scale. Such views are neither unattractive nor attractive, but seen as neutral, bland and mediocre. They are most likely to become those areas of the townscape which are blanked-out by the user-resident on account of their lack of perceptual stimulation.

6.6 A Study of the Perception of Unattractive Townscapes: The Outcome

Four separate themes have emerged from this study of the perception of unattractive townscapes. First, there is a consensus on urban unattractiveness. Urban unattractiveness is widespread in the everyday environment and should become the focus of efforts to improve environmental quality. Second, contrary to professional opinion, the general public are very much aware of the quality, or rather, the diminishing quality of the urban environment. Environmental awareness is not exclusive to the educated elite, or the middle classes, concern for the present-day townscape is felt no less intensely by lower socio-economic groups. Finally, the functional dimension and communication factor provide useful starting blocks for future research on the perception and understanding of urban aesthetics.

To some extent, the economic recession and scarcity of investment of new development has reduced the speed, scale and number of recent redevelopment schemes. It has created a temporary breathing space which should be used by the design and planning professions and politicians, to take stock of the townscape situation. They should acknowledge the failings of the Modern Movement in architecture and the general public's resentment of its complete departure from traditional scale, style and materials, and its arrogant propogation at the expense of older, familiar and valued townscape features. They should pay greater attention to the feelings of those for whom they plan and design. For as His Royal Highness, Charles, Prince of Wales (1984) recently acknowledged:

> "For far too long, some planners and architects have consistently ignored the feelings and wishes of the mass of ordinary people in this country".

Academics have an important role to play in improving the quality of the urban environment by working towards bridging the theoretical gap in urban aesthetics. Yet in spite of the theoretical vacuum much can be done to improve the quality of the everyday environment. There should be tighter controls placed on vacant and derelict land, more local clean-up and urban face-lift campaigns, an increasing practice of retaining traditional familiar building facades in redevelopment schemes and a greater involvement of ordinary people in the urban development and improvement processes. The urban malaise is endemic but not incurable. Townscape quality and a sense of place cannot be created overnight but planners, architects, politicians, academics and the ordinary townscape user <u>all</u> have important parts to play in making the average townscape a more meaningful and satisfying experience.

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Appendix I - Contents

APPENDIX I Townscape Photographs

Photograph 1: Slough Trading Estate, Edinburgh Avenue

Photograph 2: Rotherham Eastwood Trading Estate

Photograph 3: Rotherham Bus Station and Car Park

Photograph 4: Rotherham Civic Offices and Public Library

Photograph 5: Slough High Street

Photograph 6: Slough Queensmere Shopping Centre

Photograph 7: Rotherham - Derelict Victorian terraced houses, Fitzwilliam Road

Photograph 8: Slough - derelict shops and houses, Crown Corner

Photograph 9: Rotherham - boarded up and derelict site, Frederick Street

Photograph 10: Rotherham - Parkgate derelict industrial site

APPENDIX II:

Questionnaire

APPENDIX II

SECTION ONE: Length of Residence

1. Have you always lived in Rotherham/Slough?
   1) Yes
   2) No

If NO

2. How long have you lived in R/S?
   1) Less than 6 months
   2) 7-12 months
   3) 13-24 months
   4) 2-5 years
   5) 6-10 years
   6) 11-15 years
   7) 16-20 years
   8) 21-30 years
   9) 31 years or more

3. Where else have you lived?
4. How long did you live there?

	LOCATION	TIME (Use Q.2. coding)
P/C	________________	
	________________	
	________________	

3
5
7

5. With which area do you feel you most belong?
   1) Rotherham
   2) Slough
P/C 3) Other, please specify ________________

P/C 6. Why? ________________
____

10

7. Have you always lived in this area of R/S?
   1) Yes
   2) No

If NO

8. In which other parts of the town have you lived?
9. How long did you live there?

	LOCATION	TIME (Use Q.2. coding)
P/C	________________	
	________________	
	________________	
	________________	

14
16
18
20

SECTION TWO: Environmental Experience

I am going to ask you some questions about the visits you make to places both within and outside Rotherham/Slough. You may prefer to select your replies from a range of possible answers on these cards. (Show cards)

10. How often do you visit..?

1) Local Shops
2) Town Centre Shopping area
3) Bus Station
4) Station
5) Any other areas pl. specify

______
______
______
______

1) 3+ p.day — 22
2) 2 p. day — 25
3) 1 p. day — 28
4) 1 p. wk. day — 31
5) 2/3 p. wk.
6) 4/5 p. wk. — 34
7) 1 p. wk. — 37
8) 2/3 p. mth. — 40
9) 1 p. mth. — 43
A) 1/2 p. qtr.
B) 1/2 p. yr.
C) Never

11. How do you normally travel there?

1) Walk — 23
2) Cycle — 26
3) Motorcycle (driver) — 29
4) Motorcycle (passenger) — 32
5) Car (driver)
6) Car (passenger) — 35
7) Bus — 38
8) Commercial vehicle driver — 41
9) Commercial vehicle passenger — 44
A) Combination of above pl. specify

______

B) Other, pl. specify

______
______

12. Do you always follow the same route?

1) Yes
2) No
3) Varies, subject has control
4) Varies, subject does not have control

SECTION TWO: Environmental Experience cnt.

13. How often do you visit....?

1)Other towns spfy.

2)Rural areas spfy.

3)Coast spfy.

4)Other countries spfy.

14. How do you normally travel there?

1)Car driver
2)Car passenger
3)Coach/bus
4)Train
5)Motorcycle driver
6)Motorcycle passenger
7)Commercial vehicle driver
8)Commercial vehicle passr.
9)Sea
A)Air
B)Combination of above spfy.
C)Other, spfy.

15. Approx. how long do you stay there?

1)$\leqslant\frac{1}{2}$ day
2)day visit return p.m.
3)wk.end visit
4)4-6 days
5)week
6)8-10 days
7)11-14 days
8)15-21 days
9)3/4 weeks
A)month
B)Other, spfy.

16. What is the main purpose of your visit?

1)Work
2)Friends, family
3)Shopping
4)Education
5)Medical
6)Recreational pursuits
7)Pleasure
8)Holiday
9)Other spfy.

SECTION THREE: Residential Satisfaction

● 17. If you were given the opportunity to move would you want to live elsewhere in R/S ?
1) Yes
2) No

If YES
P/C 18. Where would you rather live? ____________

P/C 19. Why? ____________

● 20. If you were given the opportunity to move away from R/S would you want to live elsewhere?
1) Yes
2) No

If YES
P/C 21. Where would you rather live? ____________

P/C 22. Why? ____________

P/C ● 23. How would you describe R/S?
____

24. Do you find R/S pleasing to look at?
1) Yes
2) No
3) Certain parts only, please specify

P/C ____________

-4-

25. Which features of the town do you find the most unpleasant to look at?

26. Why?

P/C

FEATURES	REASONS
1) None	______
2) ______	______
3) ______	______
4) ______	______

29 31 33

27. Which features of the town do you find the most attractive to look at?

28. Why?

P/C

FEATURES	REASONS
1) None	______
2) ______	______
3) ______	______
4) ______	______

35 37 39

29. Would you like to see any changes made to the appearance of R/S?

1) Yes

2) No

If YES

30. What changes would you like made?

P/C

LOCATION	CHANGE
______	______
______	______
______	______
______	______
______	______
______	______
______	______
______	______

SECTION FOUR: Interviewee Details

31. Sex
1) Male
2) Female

32. Age In which category does your age fall? (Show card)
1) 16-20 years
2) 21-30 years
3) 31-40 years
4) 41-50 years
5) 51-60 years
6) 61-65 years
7) 66-70 years
8) 71-80 years
9) 81+

33. Employment Are you ....
1) In full-time employment?
2) In part-time employment?
3) On maternity/sick leave from full-time employment?
4) On maternity/sick leave from part-time employment?
5) Retired?
6) Unemployed?
7) State Pensioner?
8) In full-time study?
9) Full-time housewife?

/C 34. What is/was your occupation? ______________________

35. Is your husband/wife/parents ....
1) In full-time employment?
e.t.c. as per Q.33. coding, plus extra codes:
A) Single
B) Divorced
C) Widow/widower

/C 36. What is /was his/her job? ______________________

37. House Tenure Do you ......
1) Rent this property from the Council?
2) Rent this property from a private landlord?
3) Own this property, having purchased it from the Council?
4) Own this property?

-6-

SECTION FIVE:

38. Type of Dwelling 53

1) House semi-det.
2) House terraced
3) Bungalow det.
4) Bungalow semi-det.
5) Bungalow terraced
6) Flat in purpose-built estate/complex
7) Flat converted
8) Maisonette

39. Town 54

1) Rotherham
2) Slough

. Address ______________________________ 55

____

41. Time of Interview 56

1) Morning
2) Afternoon (12.01-18.00)
3) Evening

42. Day 57

1) Monday
2) Tuesday
3) Wednesday
4) Thursday
5) Friday
6) Saturday

43. Month 58

1) October
2) November
3) December
4) January
5) February
6) March

44. Questionnaire Reference Number ____________________ 59

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Appendix III - Contents

Appendix III contd.

Table 14: Photograph 7 preference explanations supplied by Slough respondents but NOT reiterated by Rotherham respondents.

Table 15: Photograph 8 preference explanations supplied by Rotherham respondents but NOT reiterated by Slough respondents.

Table 16: Photograph 8 preference explanations supplied by Slough respondents but NOT reiterated by Rotherham respondents.

Table 17: Photograph 9 preference explanations supplied by Rotherham respondents but NOT reiterated by Slough respondents.

Table 18: Photograph 9 preference explanations supplied by Slough respondents but NOT reiterated by Rotherham respondents.

Table 19: Photograph 10 preference explanations supplied by Rotherham respondents but NOT reiterated by Slough respondents.

Table 20: Photograph 10 preference explanations supplied by Slough respondents but NOT reiterated by Rotherham respondents.

Table 1: Photograph 1 Preference Explanations Supplied by Rotherham respondents but NOT reiterated by Slough respondents

	Category frequency total
Condition	(2)
more lived in	
has potential	
Style	(6)
few heavy buildings	
buildings not crowded	
compact	
less flat	
nice windows	
better landscaped	
Activity	(2)
sky: only activity	
deserted/empty	
Colour	(1)
colourful	
Aesthetic	(2)
nothing pleasing to the eye	
unpleasant	
Contents Description	(2)
wide road	
Audio	(1)
peaceful	
Tactile	(1)
bleak	
Emotion	(2)
cooling towers - interesting	
less depressing	
Photographic quality	(2)
definite focal point	
view has only two straight lines	
Weather	(1)
less dull	
Comparisons	(2)
like View 2	
like a Sheffield view	
Other reasons	(3)
people would not go there	
easier to reach	

Table 2: Photograph 1 Preference explanations supplied by Slough respondents but NOT reiterated by Rotherham respondents

	Category Frequency Total
Condition	(8)
good condition	
in use/not derelict	
fresh	
improved	
Style	(13)
buildings interesting	
building shape better	
buildings new	
well laid out/organised	
buildings too highly packed	
ram. shackle/hotch potch of buildings	
Activity	(3)
something happening	
Colour	(1)
grass/green	
Lighting	(1)
dull	
Emotion	(13)
factories boring	
depressing	
inhospitable/souless	
reminds me of unhappy workdays	
reminds me of happy workdays	
impressive	
remember it as it was in the past	
Location	(8)
Slough/local	
near home	
too close to home	
out of town	
Familiarity	(14)
familiar/know it	
see cooling towers every day	
representative of reality	
worse in reality	
Dislke	(9)
Other Reasons	(6)
work there	
would hate to work there	
no hoardings	
like	

Table 3: Photograph 2 Preference Explanations Supplied by Rotherham Respondents but NOT reiterated by Slough respondents

	Category Frequency Total
Condition	(10)
less run down	
wild looking	
dirty	
barren grassland	
natural	
finished	
Style	(4)
buildings very plain	
lower buildings give more light	
brigher buildings	
not closed in	
Activity	(1)
looks busy	
Colour	(3)
less colourful	
delicate colouring	
colour off-putting	
Contents Description	(1)
something there	
no chimnies	
less industry	
Tactile	(1)
warm-looking	
Economic Function	(1)
development started	
Photographic Quality	(10)
more objects in photo/more to see	
skyline clearer/more sky	
brighter photo	
items of interest too far away	
photo unclear	
Weather	(1)
blue sky	
Recommendations	(1)
foreground should be screened off	

/contd...

Table 3 contd..

Familiarity (8)

too familiar
know they've finished but doesn't appear so
know nice parts there
know its been cleaned up a lot
know a lot goes on there
born near there
worked there

Other Reasons (6)

too flat/skyline too flat
dislike 'asbestos' buildings
can never be altered
industry leads to progress

Table 4: Photograph 2 Preference Explanations Supplied by Slough respondents but NOT reiterated by Rotherham respondents

	Category Frequency Total
Condition	(9)
derelict looking	
fresh/fresh air	
permanent looking - less likely to fall down	
Style	(8)
too new looking	
less muddle/jumble	
less organised	
buildings have no character	
fewer concrete buildings	
buildings have continuity	
Activity	(2)
desolate/deserted/barren	
Aesthetics	(1)
plain	
Contents Description	(1)
no cooling towers	
Tactile	(1)
cold-looking	
Economic Function	(3)
functional/useful	
underdeveloped/incomplete	
Emotion	(3)
arouses curiosity	
too closely resembles workplace	
pity buildings are there	
Photographic quality	(2)
few things in the picture	
view fades into the distance	
unclear	
Weather	(2)
open sky	
brighter sky	
Location	(1)
country near by	

/contd...

Table 4 contd..

Familiarity unfamiliar/unknown	(2)
Comparisons like a derelict air field	(1)
Dislike	(4)
Other Reasons like	(2)

Table 5: Photograph 3 Preference Explanations Supplied by Rotherham Respondents NOT reiterated by Slough Respondents

	Category Frequency Total
Style	(5)
too regular	
poor design	
concrete	
straight lines	
slats in building give a sense of space	
Activity	(4)
dead	
meeting place	
people near by	
Colour	(3)
white/cream coloured building	
colours cheerful	
Smell	(2)
fumes	
Tactile	(1)
a wind tunnel	
Economic Function	(1)
a waste - few cars use the car park	
Emotion	(3)
cheerful	
depressing	
reminds me of being loaded-up with shopping	
Weather	(5)
possibly the suns shining on it	
Familiarity	(8)
I worked there	
I know the area around it is better	
Other	(3)
no bill boards	
little skyline	
do not like car parks	

Table 6: Photograph 3 Preference Explanations Supplied by Slough Respondents NOT reiterated by Rotherham respondents

	Category frequency total
Condition	(4)
unclutteredaa	
not messy	
fresh	
Style	(9)
building nice shape	
well made	
shows little imagination	
Activity	(2)
little activity	
less crowded	
Aesthetic	(2)
striking	
appealing	
Emotion	(5)
boring	
uninteresting	
impersonal	
unfriendly	
road looks safer	
Comparisons	(3)
like Slough bus station	
Other	(7)
more to see	
little or nothing to see	
dislike bus stations	
The New Age	

Table 7: Photograph 4 Preference Explanations Supplied by Rotherham Respondents NOT reiterated by Slough Respondents

	Category Frequency Total
Style	(11)
building shape artistic	
dislike shape	
geometric	
uniform	
set away from the road	
compact	
building not too high	
not in character with the rest of Rotherham	
imposing	
over powering - feel insignificant	
functional style	
Activity	(3)
life	
little activity	
empty	
Colour	(3)
dislike grey colour	
Content Description	(2)
only buildings	
something to look at	
Emotion	(2)
cheerful	
married there	
Recommendations	(2)
needs more flowers	
should screen off the cows	
Familiarity	(3)
know there is little industry near there	
pass often	
a good town by-pass	
Representative of Reality	(3)
duller and worse in reality	
Comparison	(6)
like an institution	
like army barracks	
like photograph 6 (Queensmere)	
like kiddies' building blocks	

/contd...

Table 7 contd..

Dislike (3)

Other (10)

no factories
car park convenient
has a bit of everything
dislike car park
dislike the road its busy looking
dislike new library
dislike smoked glass
like the library

Table 8: Photograph 4 Preference Explanations Supplied By Slough Respondents but NOT reiterated by Rotherham Respondents

	Category Frequency Total
Condition	(5)
presentable	
fresh	
richer	
Style	(13)
buildings are different heights	
ultra modern dislike	
modern-more interesting	
old	
too many buildings	
buildings fit their surroundings	
clean cut buildings	
outline pleasant	
less concrete - looking	
buildings - elegant	
Activity	(1)
different colours	
Aesthetic	(3)
ugly	
flashy	
Emotion	(6)
not depressing	
to many cars to be safe	
daunting, eerie	
friendlier	
Photographic Quantity	(1)
view not blocked	
Comparisons	(7)
like a hotel	
like council flats	
like a college	
like Uxbridge Arts Centre	
like Brunel College Uxbridge	
like Bracknell	
like buildings in Maidenhead	
Other	(8)
more to do there	
like	

Table 9: Photograph 5 Preference Explanations Supplied By Rotherham Respondents but NOT reiterated By Slough Respondents

	Category Frequency Total
Condition	(3)
lived-in look	
more developed	
Style	(7)
not closed in	
roomy/airy	
few multi storey buildings	
dislike high buildings	
uniform - like many high streets	
buildings blend well together	
brighter buildings	
Activity	(2)
crowded/occupied	
Colour	(2)
trees set off the view	
Lighting	(2)
natural light/daylight	
Aesthetic	(2)
less off-putting	
people are attractive	
Content Description	(4)
a mass of shops	
more shops	
people, not just buildings	
people milling about	
Photographic Quality	(5)
a focal point	
depth to the picture	
unclear	
dislike photograph views that taper away	
cannot see entire buildings	
Location	(1)
a town view	
Recommendations	(1)
could be brightened-up	
Comparisons	(3)
like Christmas - people shopping	
like a holiday post card	
unlike Rotherham	

/contd...

Table 9 contd..

Other	(3)
dislike big shops	
would be very different without the cars or people	
looks like a nice shopping centre	

Table 10: Photograph 5 Preference Explanations Supplied By Slough Respondents NOT reiterated by Rotherham Respondents

	Category Frequency Total
Condition	(3)
no scrubland	
drab	
fresh	
Style	(6)
continental-looking	
more character	
no character	
hotch-potch of buildings that do not compliment each other	
older buildings	
Activity	(1)
awake	
Colour	(4)
less dowdy	
colours of building contrast	
less grey stone	
grey stone buildings along the High Street	
Aesthetic	(1)
inviting	
Audio	(2)
noisy	
Economic Function	(1)
functional - has a purpose	
Emotion	(3)
associate it with pleasure	
remember High Street of the past	
Photographic Quality	(2)
too long view	
too wide view	
Location	(2)
dislike town centre	
Familiarity	(19)
know it/familiar	
its local	

/contd..

Table 10 contd..

Comparisons	(9)
spoilt compared with the past	
improved over the years	
like yesterday's High Street best	
dislike today's High Street	
Other	(5)
natural	
less traffic in that part of the High Street	
always congested there	

Table 11: Photograph 6 Preference Explanations Supplied by Rotherham Respondents but NOT reiterated by Slough Respondents

	Category Frequency Total
Condition	(4)
half finished/incomplete	
forgotten	
developed/built	
Style	(9)
too square	
very bare/blank-looking	
granite-like/granite canyon	
concrete-harsh	
too close to the road	
Activity	(1)
not empty	
Colour	(2)
colour off putting - no green	
same colour	
Lighting	(2)
no brightness	
darkness off-putting	
gets darker as you enter	
Content Description	(4)
only buildings	
empty places for sale	
shadows	
double yellow lines	
Audio	(1)
quiet	
Tactile	(3)
bleak-cold	
Economic Function	(1)
looks unused as a shopping centre	
Emotion	(5)
could explore	
overpowering	
more cheerful	
off-putting especially at night time	
possibly dangerous for the elderly	
Photographic Quality	(1)
blurred	

/contd..

Table 11 contd..

Location	(1)
town centre	
Recommendations	(2)
should be more activity and people there	
could be improved with flowers	
Comparisons	(9)
like a crematorium	
like a tennement	
like a theatre	
like photograph 3	
like photograph 4	
like Doncaster's Arndale Centre	
Other	(5)
does not attract people to buy	
prefer streets to shopping arcades	
possibly early because no one's about	
steps disappear into nothing	
could pass by and not notice it	

Table 12: Photograph 6 Preference Explanations Supplied By Slough Respondents But NOT Reiterated By Rotherham Respondents

	Category Frequency Total
Condition	(4)
impersonal	
shabby	
Style	(19)
very man-made	
no character	
deep	
flat	
poor design/bad layout	
architecture better	
an architect's second best	
lacks imagination	
attempt to marry old with new - a failure	
higher buildings	
modern failure	
strange shape	
hard-looking	
plain	
Activity	(4)
no life	
dead	
less activity	
Colour	(3)
no colour	
Aesthetic	(3)
not inviting	
appealing	
little to offer as a view	
Content Description	(7)
shops are interesting	
shops closed-up	
a place to meet	
Economic Function	(8)
handy/convenient	
Emotion	(8)
can never be improved	
here to stay forever	
get no pleasure from it, inside or outside	
wants to swallow you up	
sad	
boring	

/contd..

Table 12 contd...

<u>Photographic Quality</u>	(2)
little light in photograph	
<u>Weather</u>	(2)
a dull day	
depressing even on a nice day	
<u>Familiarity</u>	(26)
familiar	
more to see inside	
a nice centre	
<u>Other</u>	(11)
like	
reminds me of work	
something to look at	
unlike an entrance	
prefer new materials to old	

Table 13: Photograph 7 Preference Explanations Supplied By Rotherham Respondents But NOT Reiterated By Slough Respondents

	Category Frequency Total
Condition	(6)
condemned	
decayed	
Style	(5)
interesting style	
too regular in design	
less closed in	
chimnies on new houses missing	
Activity	(2)
nothing going on	
Colour	(2)
van adds colour	
some greenery	
Lighting	(1)
not dingy	
Content Description	(5)
something to look at	
just a row of houses	
slum clearance area	
Audio	(1)
noisy	
Economic Function	
no function/no purpose	
Emotion	(2)
remember happy times in houses like that	
remember childhood in houses like that	
Photographic Quality	(2)
clearer	
no view at all	
Recommendations	(3)
could not be done up - past restoring	
Familiarity	(18)
know well	
pass often	
used to be nice	

/contd...

Table 13 contd..

Familiarity contd..
Rotherham people accustomed to it
know there is nothing being done to them
been like that for years - don't know when
 something will be done
know they'll be knocked down soon

Comparisons (6)
like a shanty town
like the Blitz
like Coronation Street
like photograph 8
like photograph 10

Other (4)
gives strangers a bad impression of Rotherham
image of the traditional North
represents the old style community now lost
due for redevelopment

Table 14: Photograph 7 Preference Explanations Supplied By Slough Respondents But NOT Reiterated By Rotherham Respondents

	Category Frequency Total
Condition	(2)
not overgrown	
Style	(9)
bricks preferable to concrete	
poky	
cramped small houses	
closed-in	
tightly packed	
confined space	
Activity	(5)
dead	
lifeless	
Colour	(2)
colours	
more colours	
Lighting	(2)
dull	
dismal	
dingy	
Content Description	(2)
nothing there	
Audio	(2)
quiet	
peaceful	
Emotion	(6)
could explore	
offensive	
annoying	
unsafe/dangerous	
want to forget these types of places	
morbid	
Photographic Quality	(2)
view blocked off	
Other	(4)
road to hell	
eyeless corpse	
too many buildings like that	
poverty	

Table 15: Photograph 8 Preference Explanations Supplied By Rotherham Respondents But NOT Reiterated By Slough Respondents

	Category Frequency Total
Condition	(13)
less derelict	
less wild-looking	
requires less attention	
decaying	
rough-looking	
Style	(1)
closed in	
Activity	(1)
less empty/stark	
Colour	(2)
hoardings brighten it up - a splash of colour	
Lighting	(1)
dismal	
Content Description	(1)
clean pavement	
Tactile	(1)
warmer	
Economic Function	(3)
people may be living there	
useful places around the view e.g. Job Centre	
houses empty	
Emotion	(1)
could explore	
Photographic Quality	(7)
variety - glass, buildings, hoardings	
more features to catch the eye	
clearer	
no view	
can only see foreground	
cannot see around the building	
dark photograph	
Location	(1)
appears to be close to town	

/contd...

Table 15 contd..

Comparisons (9)

like photograph 7
like photograph 9
like photograph 2
slum like
like parts of Rotherham
like death
like a chapel

Other (5)

no factories
more than just rubble
could ignore the foreground and look only at
 the development behind
path leads eye to development behind
end of the world

Table 16: Photograph 8 Preference Explanations Supplied By Slough Respondents But NOT Reiterated By Rotherham Respondents

	Category Frequency Total
Condition	(2)
nicely untidy	
fresh/airy	
Style	(5)
nice shaped houses	
good sized houses	
typical 'old' Slough	
Activity	(2)
dead	
little activity	
Content Description	(2)
nothing to see	
Economic Function	(4)
uninhabitable	
out of use/empty	
looks as though there's somewhere to go	
Emotion	(11)
more interesting	
hope it's development will be for the better	
offensive/annoying	
old Slough disappearing fast - a remaining piece	
safer to walk around	
Photographic Quality	(2)
greater contrasts	
see less - a close distance shot	
Location	(1)
outskirts	
Recommendations	(4)
needs bulldozing	
Familiarity	(19)
know it's to be developed	
familiar	
know redevelopment has started	
area around it much improved	
been in present state for years	
Other	(1)
dislike empty houses	

Table 17: Photograph 9 Preference Explanations Supplied By Rotherham Respondents But NOT Reiterated By Slough Respondents

	Category Frequency Total
Condition	(14)
derelict	
sprawling	
bill board emphasise dereliction	
not developed	
houses ready for demolition	
Style	(7)
old and new do not go well together	
blank-looking	
more sky - not blocked out	
would be plain without pot plants	
plant pots very artificial	
Activity	(2)
nothing happening or to do	
Colour	(1)
pot plants add colour	
Lighting	(1)
dismal	
Smell	(1)
in summer it smells	
Economic Function	(2)
unused/not useful	
Emotion	(3)
nothing of interest	
remember it in past - it was lovely	
Photographic Quality	(1)
clearer	
Weather	(1)
bright day	
Location	(1)
In town	
Recommendations	(5)
could be landscaped until required	
should plant flowers in the pots	
pots should be on the edge of the pavement	

/cond.

Table 17 contd..

Familiarity	(27)
visit often	
know it/familiar	
know area around it better	
know it's to be redeveloped	
likely to see people there I know	
worked there	
improvements to tidy up area have begun	
no shops are near by, been demolished	
a planning development mistake	
been in present condition for years	
Representative of Reality	(5)
usually surrounded with people	
usually more going on	
photo is better than it is in reality	
Comparison	(1)
like photograph 8	
Other	(23)
dislike flower pots	
will be better when developed	
could be replaced with a concrete monstrosity	
don't know when area will be developed	
flower pots try to fool people that redevelopment has started	
lost much of 'old' town to demolition - best bits already demolished	
more than just rubble	

Table 18: Photograph 9 Preference Explanations Supplied By Slough Respondents But NOT Reiterated By Rotherham Respondents

	Category Frequency Total
Condition	(6)
better kept	
decent	
ramshackle buildings	
Style	(11)
less character	
hotch-potch of buildings/higgledypiggledy	
better laid out	
compact	
flat	
ordinary	
Colour	(2)
drab	
less green	
Aesthetic	(1)
more artistic	
Content Description	(15)
no long grass	
something there	
nothing there	
building site	
pub on the corner	
road works	
Audio	(2)
less noisy/peaceful	
Economic Function	(4)
buildings are habitable/in use/ functional	
Emotion	(6)
places to explore	
may be very different in the future after redevelopment	
cheerful	
hope something nice is built in the future	
Photographic Quality	(2)
pot plants are the focal point	
less to see a restricted view	

/contd...

Table 18 contd..

Location	(2)
outskirts	
shops probably near by	
Comparison	(2)
like Maidenhead	
like Old Slough	
Other	(6)
progress	
more on the sky line	
prefer towns to fields	
dislike things in rows - there's no rows in the photo	

Table 19: Photograph 10 Preference Explanations Supplied By Rotherham Respondent But NOT Reiterated By Slough Respondents

	Category Frequency Total
Condition	(4)
forgotten/forlorn	
more character	
Activity	(4)
action being taken to improve it	
Content Description	(7)
devastation only	
old factory site	
smoking	
old buildings cleared	
Smell	(2)
probably smells	
Economic Function	(4)
plenty of work to be done there - means jobs	
it's obvious they're going to make use of it	
Emotion	(5)
remember how it was in the past	
scares me	
dangerous - fire near cylinder	
like ruined areas	
reminds me of a gypsy camp	
Familiarity	(3)
worked there	
know well	
know it's being developed	
Other	(9)
will be better when cleared	
could be anything lying around there - dangerous	
may become something nice	
could be developed to a high standard	
don't know whats going to happen to it	
smoke off putting	
result of lack of industrialisation	
could remain like that for years	
impossible to develop	

Table 20: Photograph 10 Preference Explanations Supplied By Slough Respondents But NOT Reiterated By Rotherham Respondents

	Category Frequency Total
Condition	(4)
old	
eyesore but has character	
rough	
not completed	
Aesthetic	(1)
nice	
Content Description	(1)
possibly rats there	
Emotion	(3)
not possible to imagine it's past	
hope something better than the Queensmere is built there	
Photographic Quality	(1)
more to see/further/distance shot	
Recommendations	(3)
needs developing	
could be developed	
Other	(1)
no traffic	

Appendix IV - Contents

Appendix IV contd.

APPENDIX IV Questionnaire Data Tables

Table 1 Sex of the respondent sample

Sex	Total Sample		Rotherham Sample		Slough Sample	
Male	38%	(91)	42%	(51)	33%	(40)
Female	52%	(149)	58%	(69)	67%	(80)
	n =	240	n =	240	n =	120

Table 2 Day and Time of Interviews

Day	Morning	Afternoon	Evening	Row Total
Monday	13	18	3	34 (14%)
Tuesday	21	29	4	54 (23%)
Wednesday	14	26	11	51 (21%)
Thursday	12	26	3	41 (17%)
Friday	17	21	-	38 (16%)
Saturday	14	8	-	22 (9%)
	91 (38%)	128 (53%)	21 (9%)	240

Table 3 Employment Status

Employment Status	Rotherham sample males	Rotherham sample females	Slough sample males	Slough sample females
Full-time	33% (17)	7% (5)	50% (20)	11% (9)
Part-time	-	2% (15)	-	29% (23)
Unemployed	20% (10)	1% (1)	17% (7)	4% (3)
Retired	47% (24)	22% (15)	33% (13)	15% (12)
State Pensioner	-	12% (8)	-	10% (8)
Housewife	-	36% (25)	-	31% (25)
	n = 51	n = 69	n = 40	n = 80

Table 4 Rotherham sample age groups

Age	Total Rotherham sample	Rotherham Males	Rotherham Females
16-30 years	14% (17)	8% (4)	19% (13)
31-50 years	26% (31)	22% (11)	29% (20)
51-65 years	38% (45)	37% (19)	38% (26)
66-81 years	22% (27)	33% (17)	14% (10)
	n = 120	n = 51	n = 69

Table 5 Slough Sample Age Groups

Age	Total Slough sample	Slough males	Slough females
16-30 years	20% (24)	23% (9)	19% (15)
31-50 years	33% (40)	25% (10)	38% (30)
51-65 years	26% (31)	25% (10)	26% (21)
66-81 years	12% (25)	27% (11)	17% (14)
	n = 120	n = 40	n = 80

Table 6 Socio-economic groupings of the respondent sample

Socio-economic grouping	Total sample		Rotherham sample		Slough sample	
SEG.11(Class 5)	6%	(15)	6%	(7)	7%	(8)
SEG.7/10(Class 4)	29%	(70)	20%	(24)	38%	(46)
SEG.9(Class 3)	38%	(90)	47%	(56)	28%	(34)
SEG.6/12(Class 3)	14%	(34)	13%	(15)	16%	(19)
SEG.5-2/8(Class 3)	10%	(23)	10%	(13)	8%	(10)
SEG.5-1/1-2(Class 2)	3%	(8)	4%	(5)	3%	(3)
	n =	240	n =	120	n =	120

Table 7 Form of house tenure held by the respondent sample

House tenure	Total sample		Rotherham sample		Slough sample	
Council rented	74%	(177)	87%	(105)	59%	(72)
Private rented	3%	(8)	-		7%	(8)
Owner occupied	23%	(55)	13%	(15)	34%	(40)
	n =	240				

Table 8 Indigenous and non-indigenous Rotherham respondent sample

	Total sample		Rotherham males		Rotherham females	
Indigenous respondents	66%	(78)	69%	(35)	64%	(44)
Non-indigenous respondents	34%	(42)	31%	(16)	36%	(25)
	n =	120	n =	51	n =	69

Table 9 Indigenous and non-indigenous Slough respondent sample

	Total sample		Slough males		Slough females	
Indigenous respondents	27%	(33)	25%	(10)	29%	(23)
Non-indigenous respondents	73%	(87)	75%	(30)	71%	(57)
	n =	120	n =	40	n =	80

Table 10 Length of Residence of Non-indigenous respondent sample

Length of Residence	Total sample	Rotherham non-indigenous sample	Slough non-indigenous sample
less than 6 months	1% (1)	-	1% (1)
7-12 months	1% (1)	-	1% (1)
13-23 months	2% (3)	-	3% (3)
2-5 years	4% (5)	5% (2)	3% (3)
6-10 years	6% (8)	2% (1)	8% (7)
11-15 years	3% (4)	-	5% (4)
16-20 years	8% (10)	17% (7)	3% (3)
21-30 years	19% (24)	17% (7)	21% (17)
Over 31 years	56% (72)	59% (24)	55% (48)
	n = 128	n = 41	n = 87

Table 11 Local environment visiting pattern of the respondent pattern

Local Visiting pattern*	Total sample	Rotherham sample	Slough sample
Housebound respondents	1.5% (3)	2% (2)	1% (1)
Very low	0.5% (1)	1% (1)	-
Low	1% (2)	1% (1)	1% (1)
Medium	34% (82)	23% (28)	45% (54)
High	58% (140)	65% (78)	51% (62)
Very High	5% (12)	8% (10)	2% (2)
	n = 240	n = 120	n = 120

* based on the number of different local areas visited

Table 12 Local environmental visiting frequency of the respondent sample

Local visiting frequency*	Total sample		Rotherham sample		Slough sample	
Housebound respondents	1%	(3)	2%	(2)	1%	(1)
Low	7%	(18)	2%	(2)	14%	(16)
Medium	69%	(165)	69%	(82)	68%	(83)
High	23%	(54)	27%	(34)	17%	(20)
	n =	240	n =	120	n =	120

*based on the frequency of visits to local areas.

Table 13 Primary mode of transport of the respondent sample

Transport	Total		Respondent sample with control over rates a) vary routes (30%)		b) do not vary routes (70%)	
Public (bus)	53%	(126)	-		-	
Car/motorcyle drivers	25%	(61)	36%	(9)	88%	(52)
Car/motorcycle passengers	13%	(30)	-		-	
Cyclists	2%	(6)	16%	(4)	3%	(2)
Walkers	7%	(17)	48%	(12)	9%	(5)
	n =	240	n =	25	n =	59

Table 14 Non-local environmental visiting frequency (environmental experience) of the respondent sample

Non-local visiting frequency	Total sample	Rotherham sample	Slough sample
Housebound respondents	6% (13)	4% (2)	7% (8)
Very low	15% (36)	21% (25)	9% (11)
Low	21% (51)	18% (22)	24% (29)
Medium	23% (56)	25% (30)	22% (26)
High	11% (26)	13% (16)	8% (10)
Very high	24% (58)	19% (22)	30% (36)
	n = 240	n = 120	n = 120

Table 15 Duration of non-local visits by the respondent sample

Visit duration	Other Towns	Rural Areas	Coastal Areas
Day	86%	94%	44%
Weekend	8%	3%	4%
4-7 days	4%	2%	36%
8-14 days	1%	1%	15%
3 weeks	-	-	1%
over 3 weeks	1%	-	-

Table 16 Purpose of non-local visits by the respondent sample

Purpose	Town Visits	Rural Visits	Coastal Visits
Work	4%	1%	-
Family & Friends	27%	2%	7%
Shopping	38%	1%	-
Shopping & Family	13%	-	-
Education	-	-	1%
Medical	1%	-	-
Recreational pursuits	4%	7%	-
Pleasure	12%	88%	32%
Holiday	-	1%	60%
Religion	1%	-	-

Table 17 Distance travelled by the Rotherham sample on visits to other towns, rural and coastal areas

Distance from Rotherham	Town Visits	Rural Visits	Coastal Visits
Immediate surroundings	-	35%	-
Up to 15 miles	54%	13%	-
16-25 miles	8%	1%	-
26-50 miles	12%	37%	-
51-100 miles	8%	13%	41%
Over 100 miles	18%	1%	59%

Table 18 Distance travelled by Slough respondents on visits to other towns, rural and coastal areas

Distance from Slough	Town Visits	Rural Visits	Coastal Visits
Immediate surroundings	-	43%	-
Up to 15 miles	44%	38%	-
16-25 miles	30%	10%	-
26-50 miles	6%	4%	-
51-100 miles	10%	1%	52%
Over 100 miles	10%	4%	48%

Table 19 The respondent sample's dissatisfaction or satisfaction to be living in Rotherham or Slough

	Total sample		Rotherham sample		Slough sample	
Dissatisfied with living in interview town	39%	(93)	33%	(40)	44%	(53)
Satisfied with living in the interview town	61%	(147)	67%	(80)	56%	(67)
	n =	240	n =	120	n =	120

Table 20 Attitudes Towards the Appearance of the interview Towns

Attitude	Total sample		Rotherham sample		Slough sample	
Favourable - town appearance pleasing	52%	(125)	66%	(79)	38%	(46)
Unfavourable - town appearance not pleasing	48%	(115)	34%	(41)	62%	(74)
	n =	240	n =	120	n =	120

Table 21 Frequency List of Rotherham townscape features considered unpleasant to look at

Unpleasant Rotherham townscape feature/view	Frequency of occurrence in the Rotherham respondents listings of unpleasant local features
derelict houses	45
derelict houses on Fitzwilliam Road	22
Bridgegate	19
derelict industrial works	13
new public library	13
demolition sites	12
new buildings	12
Masborough area	11
Canklow area	10
council flats along St Ann's Road	9
British Steel Works	9
Parkgate derelict industrial site	9
Sheffield Road (A630)	9
Civic Offices	5
Doncaster Road, Dalton	5
Wellgate area	5
Fruit stall in All Saints Square	3
W H Smith new shop building	3
Eastwood Trading Estate	3
Rotherham industry	3

Table 22 Frequency counts of the Rotherham display stimuli listed as unpleasant townscape features by the Rotherham sample

	Frequency
Stimulus 2	
Eastwood trading estate	3
industry	3
	6
Stimulus 4	
civic offices	5
new library	13
new buildings	12
	30
Stimulus 7	
derelict houses along Fitzwilliam Road	22
derelict houses	45
	67
Stimulus 9	
Bridgegate - Frederick Street	19
demolition sites	12
	31
Stimulus 10	
Parkgate derelict industrial site	9
derelict works	13
	22

Table 23 Frequency list of Slough townscape features considered unpleasant to look at

Unpleasant Slough townscape features or views	Frequency of occurrence in the Slough respondents listing of unpleasant local features
Queensmere shopping centre	38
Chalvey area	19
Slough trading estate	15
Slough High Street	7
Slough in general	6
Slough bus station	4
car parks south of Slough High Street	4
cars parked along residential roads	4
Slough multi-storey car park	3
Cooling towers	3
Fulcrum Centre	3
Gas works	3
Slough road system	3

Table 24 Frequency counts of the Slough display stimuli listed as unpleasant townscape features by the Slough sample.

	Frequency
Stimulus 1	
Slough trading estate	15
cooling towers	3
	18
Stimulus 5	
Slough High Street	7
Folcrum centre	3
	10
Stimulus 6	
Queensmere shopping centre	38

Table 25 Frequency Lists of attractive Rotherham townscape features supplied by the Rotherham sample

Type of area or feature	Frequency
Parks	
Parks	43
Clifton Park	22
Herringthorpe Park	9
Herringthorpe Playing Fields	8
Boston Park	7
Buildings	
All Saints Church	34
Chapel on the Bridge	11
Thomas Rotherham College	8
Clifton Park museum	8
New public library	6
Rotherham town centre	8
All Saints Square	43
Effingham Square	11
Rotherham Market Place	4
Outlying Areas	
Moorgate	8
Wickersley	6
Whiston	4
Greasebrough	4
Kimberworth	3
Rotherham outskirts	10

Table 26 Frequency list of attractive Slough townscape features supplied by the Slough sample

Type of area or feature	Frequency
Parks	
Parks	39
Salthill Park	21
Black Park	11
Upton Park	5
La Celles Playing Fields	4
Town Hall Gardens	7
Montem Recreation Ground	5
Buildings	
Public library	9
Old buildings	7
New buildings	4
Churches	6
Queensmere shopping centre	6
Johnson and Johnson building	4
Fulcrum centre	3
Slough High Street	5
Outlying Areas	
Upton	5
Burnham	4
Langley	4
Stoke Poges	3
Burnham Beeches	3
Slough outskirts	16

Appendix V - Contents

APPENDIX V

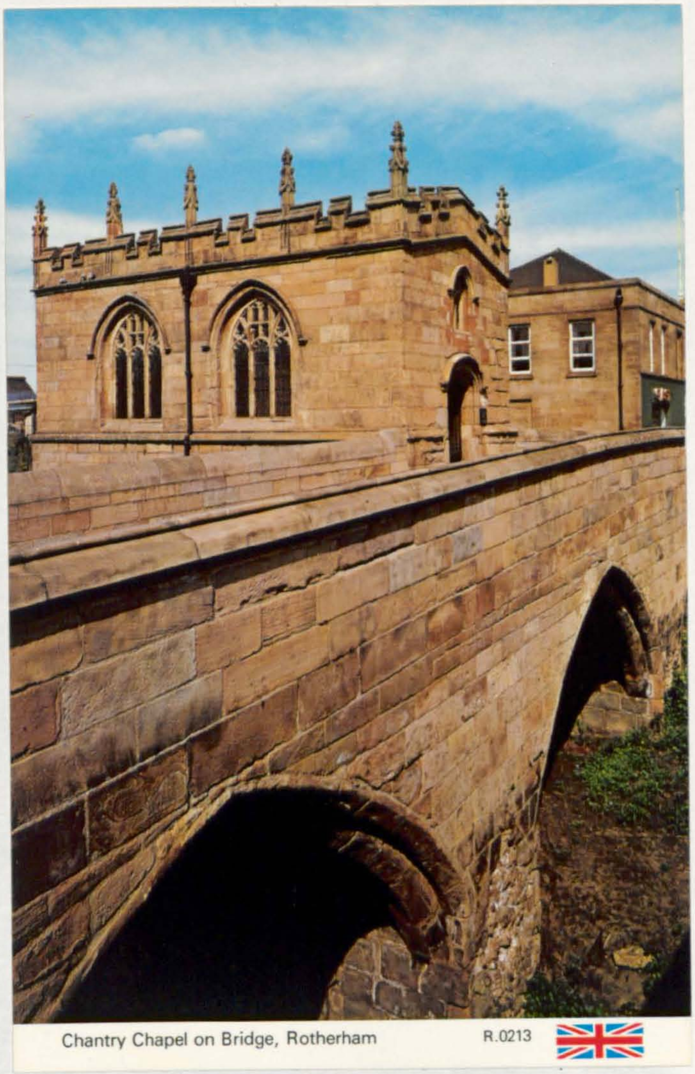

Figure 1 Chantry Chapel on The Bridge, Rotherham

APPENDIX V

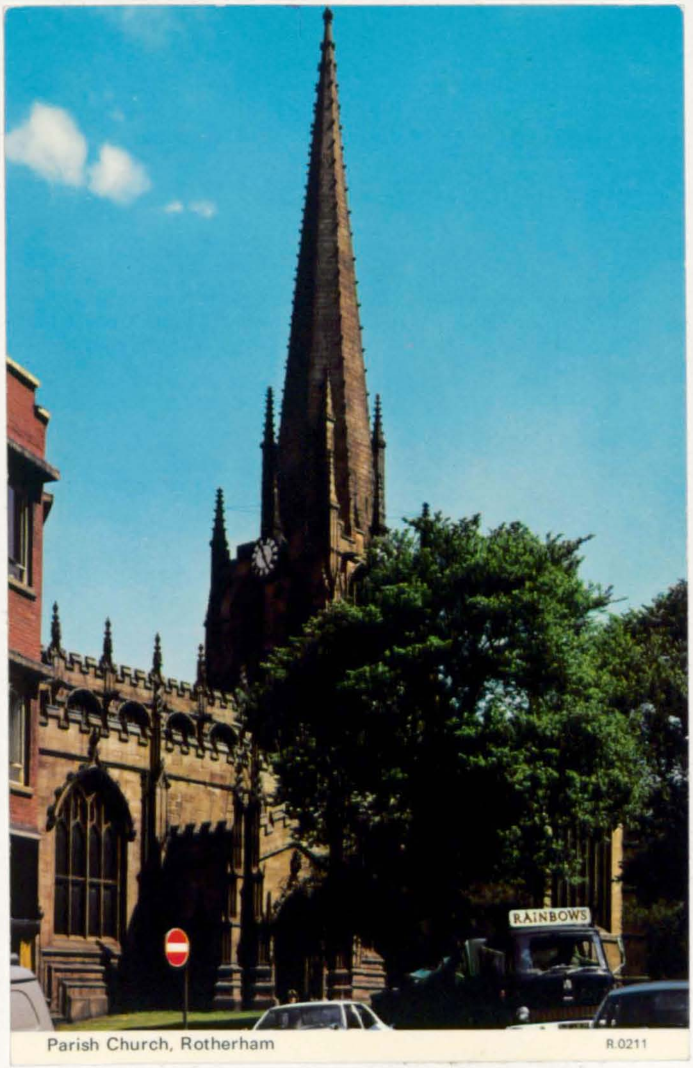

Figure 2 Historic Rotherham Townscape Features :

All Saint's Parish Church, Rotherham